

SUPPLEMENT.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2304.—VOL. XLIX.

LONDON, SATURDAY, OCTOBER 18, 1879.

PRICE (WITH THE JOURNAL) SIXPENCE
PER ANNUM, BY POST, £1 4s.

WEIGHING MACHINERY

for all Commercial purposes and graduated to any NATIONAL STANDARD by Patent Machines

HODGSON AND STEAD LIMITED

ESTABLISHED
1852.

EGERTON IRON WORKS
REGENT ROAD

Show Rooms
15 New Bailey St

Bradford Road

Uttoxeter New Rd

NEWPORT MON.
and CARDIFF

Queen Victoria St
LONDON E.C.

MANCHESTER

SALFORD

DEWSBURY

DERBY

QUEEN VICTORIA ST
LONDON E.C.

The Barrow Rock Drill

COMPANY

SUPPLY their CELEBRATED ROCK DRILLS, AIR COMPRESSORS, &c., and all NECESSARY APPLIANCES for working the said Drills.

Their DRILLS have most satisfactorily stood the TEST of LONG and CONTINUOUS WORK in the HARDEST KNOWN ROCK in numerous mines in Great Britain and other countries, clearly proving their DURABILITY and POWER.

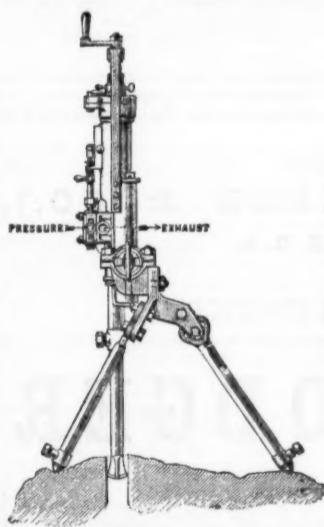
The DRILLS are exceedingly STRONG, LIGHT, SIMPLE, and adapted for ends, stope, quarries, and the sinking of shafts. They can be worked by any miner.

For PRICES, Particulars and Reports of Successful and Economical Working, apply to—

LOAM AND SON,
LISKEARD, CORNWALL.

"Cranston" Rock Drill

IS DRIVING LEVELS 200 LINEAR FEET PER MONTH IN HARD QUARTZ ROCK. "EBERHARDT" TUNNEL NOW DRIVEN IN OVER 3842 LINEAR FEET WITH THESE DRILLS AND COMPRESSORS.



For other particulars and prices, apply to—

J. G. CRANSTON,
22, Grey-street, Newcastle-on-Tyne.

THE PATENT
"ECLIPSE" ROCK-DRILL
AND
"RELIANCE" AIR-COMPRESSOR



ARE NOW SUPPLIED TO THE
ENGLISH, FOREIGN, AND COLONIAL GOVERNMENTS,
And are also in use in a number of the
LARGEST MINES, RAILWAYS, QUARRIES, AND HARBOUR
WORKS IN GREAT BRITAIN AND ABROAD.
FOR ILLUSTRATED CATALOGUE AND PRICES, apply to—
HATHORN & CO., 22, Charing Cross, London, S.W.

JOHN FOWLER & CO.,

Steam Plough Works, Leeds; and 71, Cornhill, London, E.C.

PARIS AWARDS.

THE ONLY GRAND PRIX

In the English Agricultural Section for excellence of workmanship; also a

GOLD MEDAL, SILVER MEDAL, and BRONZE MEDAL.

MANUFACTURERS OF

AIR COMPRESSORS, VENTILATORS, &c., &c.
CLIP PULLEYS, from 3 ft. to 10 ft. diameter.
STEEL WIRE ROPES.

MULTITUBULAR BOILERS, from 8 H.P. to 50-H.P.

PATENT PORTABLE RAILWAY from £265 per mile.

Catalogues, Specifications, or References to Parties using our Machinery can be had on application.

IMPROVED PATENT

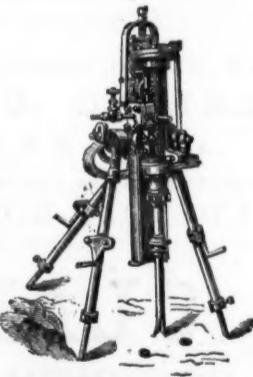
"INGERSOLL ROCK DRILL."

MEDALS AND HIGHEST AWARDS

SEVEN YEARS IN SUCCESSION
FOUR IN ONE YEAR.

American Institute, 1872.
American Institute, 1873.
London International Exhibition, 1874.
Manchester Scientific Society, 1875.
Leeds Exhibition, 1875.
Royal Cornwall Polytechnic, 1875.
Rio de Janeiro Exhibition, 1875.
Australia Brisbane Exhibition, 1876.
Philadelphia Exhibition, 1876.
Royal Cornwall Polytechnic, 1877.
Mining Institute of Cornwall, 1877.
Paris Exhibition, 1878.

AWARDED FOR
SIMPLICITY IN CONSTRUCTION.
AUTOMATIC FEED
(Perfect success)
GREAT STEADINESS.
GREAT POWER.
GREAT DURABILITY.
GREAT EFFECTIVENESS.



LE GROS, MAYNE, LEAVER, & CO.,
80, Queen Victoria Street, London, E.C.

SOLE AGENTS FOR THE

DUSSELDORF WROUGHT
IRON TUBE WORKS.

Estimates given for Air Compressors and all kinds of Mining Machinery. Send for Illustrated Catalogues, Price Lists, Testimonials, &c., as above.

SOLID DRAWN BRASS AND COPPER BOILER TUBES,

FOR LOCOMOTIVE OR MARINE BOILERS,

EITHER

MUNTZ'S OR GREEN'S PROCESS.

MUNTZ'S METAL COMPANY (LIMITED),
FRENCH WALLS,
NEAR BIRMINGHAM.

"Kainotomon" Rock Drill
SELECTED BY THE
BRITISH, PRUSSIAN, & SAXON
GOVERNMENTS.



SUPERIOR AIR COMPRESSORS.

T. A. WARRINGTON,
30, King-street, Cheapside, London.

For Excellence
and Practical Success
of Engines.



Represented by
Model exhibited by
this Firm.

HARVEY AND CO.,
ENGINEERS AND GENERAL MERCHANTS,
HAYLE, CORNWALL,
LONDON OFFICE.—186, GRESHAM HOUSE, E.C.

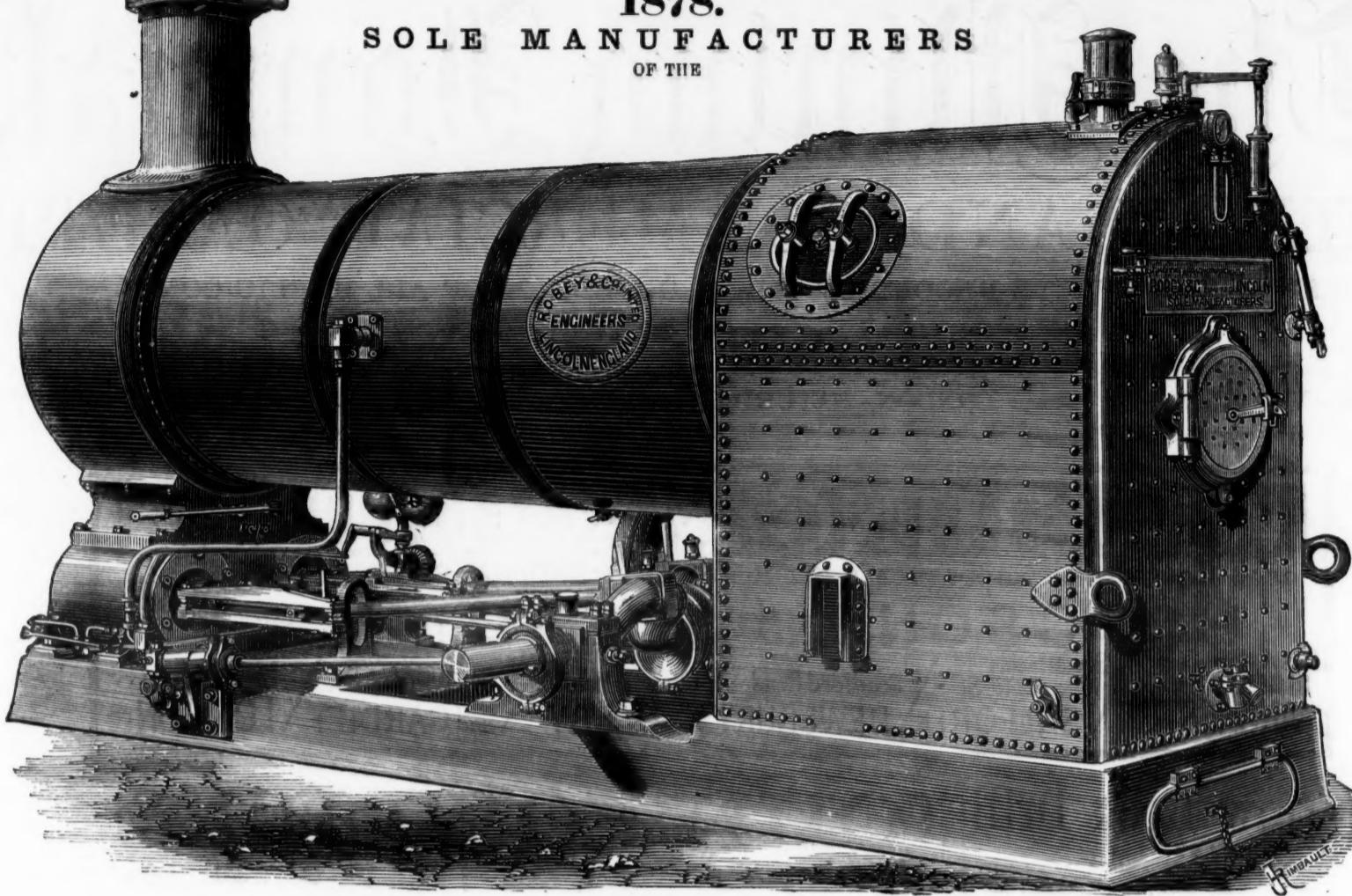
MANUFACTURERS OF
PUMPING and other LAND ENGINES and MARINE STEAM ENGINES of the largest and most approved kinds in use, SUGAR MACHINERY, MILLWORK, MINING MACHINERY, and MACHINERY IN GENERAL, SHIPBUILDERS IN WOOD AND IRON.

MANUFACTURERS OF
HUSBAND'S PATENT PNEUMATIC STAMPS.

SECOND-HAND MINING MACHINERY FOR SALE,
IN GOOD CONDITION, AT MODERATE PRICES—viz.,
PUMPING ENGINES; WINDING ENGINES; STAMPING ENGINES;
STEAM CAPSTANS; ORE CRUSHERS; BOILERS and PITWORK of various sizes and descriptions; and all kinds of MATERIALS required for MINING PURPOSES.

ROBEY & CO., ENGINEERS, LINCOLN.
AWARDED GOLD MEDAL, PARIS EXHIBITION,
1878.

SOLE MANUFACTURERS
 OF THE



No expensive foundations or brick chimneys required.

Fire-box can be arranged to burn wood and refuse fuel.

PATENT "ROBEY" FIXED ENGINES,

OF ALL SIZES, FROM 4 TO 50-HORSE POWER, FOR DRIVING ALL DESCRIPTIONS OF MINING AND STATIONARY MACHINERY.

For photographs, full particulars, and prices, apply to—

ROBEY & CO., Engineers, Lincoln.

References can be given to upwards of 5600 ENGINES of all sizes, from 2 to 50-horse power.

MECHANICAL VENTILATION OF MINES.

THE UNION ENGINEERING COMPANY (C. SCHIELE AND CO.) undertake the Construction and Erection of their Colliery Ventilation Fans, of all sizes up to the largest required quantities of air. The leading features of their system are now generally known. Some of the spiculities are: The absence of necessity for costly erections in masonry and brickwork: the small space required for the Machines, and the moderate first cost of the whole.

As the Fans are in a great measure self-contained, the necessary seats and connection with Pit are of a simple and inexpensive character. They can be arranged to be placed below ground when required, and also to work on

Drawing Shafts. Certain sizes are often used to assist in Furnaces, with good effect.

[Estimates and further information will be prepared on receipt of the necessary particulars].

FOR SINKING PURPOSES, and also for places where small quantities of air are needed for Ventilating purposes, a Special Fan is made, in various sizes, with small engine combined, complete, arranged for both forcing and exhausting air.

NOISELESS BLOWING FANS, for Smithy Fires, and other purposes.

TURBINE WATER-WHEELS, specially designed and adapted for use in Coal Mines, for high falls of water, for the purpose of developing water power, where it is available, for use in hauling, pumping, and other works.

The Firm, having had an experience of nearly twenty-five years exclusively in the above Special Departments of Engineering, are prepared to advise on any matter affecting the application of Fans or Water Power in Collieries or elsewhere.

COAL-CUTTING MACHINERY, WINDING, HAULING, AND OTHER DESCRIPTIONS OF STEAM-ENGINES.

**THE UNION ENGINEERING COMPANY (C. SCHIELE & CO.),
 PNEUMATIC AND HYDRAULIC ENGINEERS**

(SOLE PROPRIETORS AND MAKERS OF SCHIELE'S LATEST PATENTS),

2 CLARENCE BUILDINGS. BOOTH STREET. MANCHESTER.

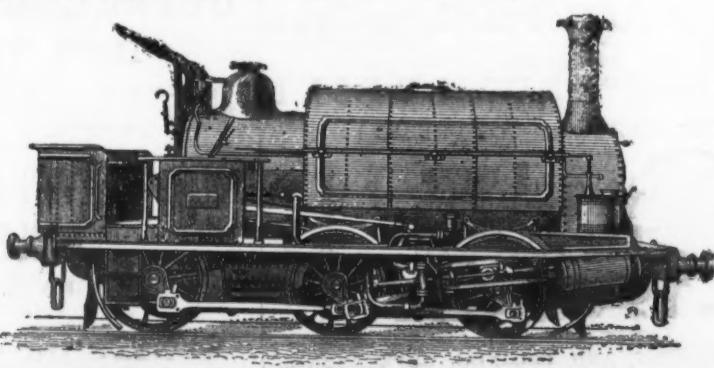
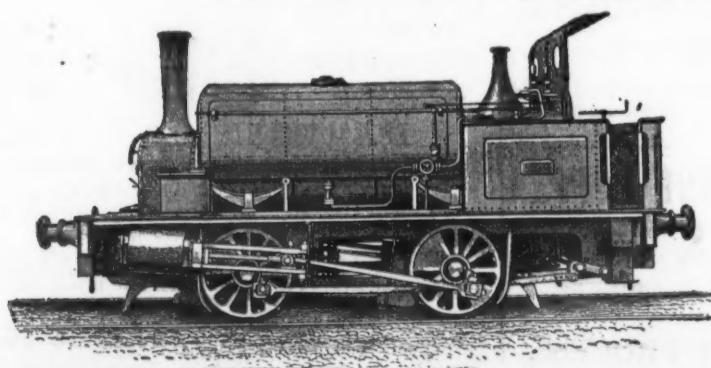
HUDSWELL, CLARKE, & RODGERS,
 RAILWAY FOUNDRY, HUNSLET, LEEDS,

ARE NOW MAKING A GREATLY IMPROVED
 CLASS OF

TANK LOCOMOTIVE,

EITHER ON FOUR WHEELS OR SIX, OF
 VARIOUS GAUGES,

IN WHICH EXTRA STRENGTH AND DURABILITY ARE COMBINED WITH SIMPLICITY AND ECONOMY IN REPAIRS.



FIRE BOXES—Copper. TUBES—Brass. TYRES—Steel. AXLES—Steel. BOILER PLATES AND MACHINERY of the best Yorkshire Iron. NEW LOCOMOTIVES, with Cylinders 8 in., 10 in., and 13 in. diameter, always in stock or in progress. SECOND-HAND LOCOMOTIVES, of various sizes, FOR SALE OR HIRE. PRICES AND SPECIFICATIONS ON APPLICATION

Original Correspondence.

DISCOVERY OF POTASH SALTS.

SIR.—Referring to my statement published in the Journal of Sept. 20, I am glad to be able to inform you that the borings of the Continental Diamond Rock Boring Company at Lübeck resulted, a few days ago, in reaching the salt layer, thus verifying a second time my previous assertions respecting the discovery of potash salts in Mecklenburg. Two successful borings have now been made, and a third borehole is to be made at a different place, by which my estate will be nearly encircled. I am, therefore, sanguine as to the success of the raising of the salt on my estate will have.

Jessenitz, near Lübeck, Oct. 10.

E. MEYER.

SAFETY-LAMPS.

SIR.—I think it right to warn colliery managers and others from purchasing lamps which are now being offered, and which are infringements of the patent "Protector lamps." Proceedings are being instituted against the makers of such lamps; and sellers and users of the same are equally liable to be proceeded against.

Manchester, Oct. 15.

W. E. TEALE.

SAFETY-LAMP TESTS.

SIR.—In a recent issue of your valuable paper Mr. D. P. Morrison suggests that a trial of different kinds of safety-lamps should take place. I most cordially support this proposition. If a few of our most eminent scientific and practical mining engineers would undertake this test much good would result. It appears to me that such tests as have taken place might be examined, and then continued from the point they have left off at. It would be convenient and facilitate the progress of such tests if the conditions which safety-lamps were subject to and expected to provide against were stated. The degree of safety, amount of light, weight of lamp, economy of burning, &c., would form some of the heads of excellence that lamps of difficult construction could fairly be compared under by well-known methods.

The Belgian Government, although not quite satisfied with their lamp, decided to adopt the one they have in use now. At the same time I am given to understand they are prepared to recommend the adoption of a safer lamp if presented. Although they acted wisely in adopting a lamp that proved the safest and most practical, still the matter should not be allowed to rest so long as it is possible to tamper with the lamp and expose the light, or pass the flame through, or by the overheating of the gauze cause an explosion when submitted to any condition that is known could exist in collieries. When the time comes I shall be pleased to contribute towards the expenses of the tests above referred to. I have frequently expressed the opinion that it is only necessary to require a real safety-lamp and that one or more will be produced which will fulfil every reasonable condition of safety.—Manchester, Oct. 15.

W. E. TEALE.

THE LONDON COAL SUPPLY.

SIR.—An article in last week's issue of a contemporary stated—"It is admitted water carriage is by far the cheapest, but the colliery owners in different parts of the West Riding are not in a position to avail themselves of it, seeing that their pits are not connected with rivers or canals, but have sidings on railways from which the coal is taken." On Sept. 20 your Journal contained an exhaustive letter from me, to which I crave especial reference, showing that Midland coal transported by proposed system would effect a saving over existing transit and attendant expenses of 1s. a ton, and for a decennial period of 15s. a ton. To meet the requirements of the entirety of the coalowners of West and South Yorkshire, Derbyshire, and Notts, it is found imperative to supplement the water conveyance from the Humber and Boston Deep by a practical and proved system of road steam traction or conveyance from the pit mouth to the barges on the Trent, Witham, Ouse, and Aire and Calder navigation, embracing thus all the collieries in these counties, without distinction as to distance. The saving effected from the pit mouth to consumers' premises in London will be as just stated, but as in every enterprise a reasonable allowance of time is always conceded before coming into full working order, the minimum saving will be 9s. and 18s. per ton respectively. When in full working order, by means of return traffic from London, displacing all the railway goods traffic, express traffic alone excepted, to the proposed undertaking at rates at which it is utterly impossible for the railways to carry, and by means of wood, grain, seed, and other traffic from Humber ports to the centres of consumption, Leeds, Wakefield, Barnsley, Sheffield, Chesterfield, Nottingham, Derby, and for further distribution to Manchester, &c., the saving will be considerably enhanced, and an impregnable monopoly of the London coal supply be secured in perpetuity. The road transit rate is based on the working of numerous steam traction engines, guaranteed by the highest class manufacturers. Behold the most effective means of annihilating all railway clamour, and the latest novelty, the parliamentary dodge, if I may be permitted to descend to such vulgar parlance, to scatter as chaff before the wind such designing expedients. They must be driven into an inextricable *cul de sac* to hit upon such a bait.

Your contemporary stated the rate from Boston Deep would be the same as from the Tyne to London, whereas in my letter in the Journal of Aug. 19 it was shown a saving of upwards of 7s. a ton was effected from Boston Deep and the Humber over the Tyne freight and attendant expenses. The average rate of railway carriage from the Durham and Northumberland pits, with shipping charges, quoted in a leading London daily paper by the chief official of the highest public authority at by far the largest coal shipping port in Great Britain, was not taken into account by the said contemporary, which exceeds our analogous rates. Your contemporary concluded by stating that "any scheme by which the present charge for coal transport from the West Riding to London could be sensibly reduced would meet with the warm support of the coalowners."

I now summon the coalowners to arise out of their lethargy, as the railway thraldom which oppresses their coal vend, and is the sole cause of the deplorable state of the Midland coal field district, being engulfed in the direst misery, is to be attributed to the supreme inaction of the masters of the position—the coalowners. The counteracting organisation of an improved system of water conveyance forms the absolute condition of rescue, and I continue to invite their active co-operation and powerful ergis.

WM. JOSEPH THOMPSON.

Little Tower-street, Oct. 14.

THE IRON AND STEEL INSTITUTE, IN SESSION AT LIVERPOOL.

SIR.—The last commentator on the proceedings of the Iron and Steel Institute, in Session at Liverpool, is the Editor of the Shipping Gazette, whose unmistakeable practical conclusion is that the steely iron, yclept mild steel, merely assimilates the Swedish iron exhibited at the first London Exhibition—the indented stem of a Swedish iron vessel through collision, bent but not cracked, as is the rule with iron plates. The Shipping Gazette enjoys a world-wide circulation; its powerful proprietors are not Cleveland ironmasters or patentees of steel furnaces, and perfectly independent. The Liverpool fiasco must carry conviction to shipowners that they must look to Swedish Lapland as the exclusive source of supply for really reliable pure steel free of phosphorus and sulphur. Goethe truly exclaimed, "Licht mehr Licht." Motives of actions are matters of opinion, and may be variously judged according as the judges are friendly or hostile, but the actions themselves are matters of fact, and can be judged by anyone who will use his eyes fairly and freely. I defy the combined reputed men of science of the Iron and Steel Institute to produce from British iron ore steel free from phosphorus and sulphur, which they have not hitherto done, and which they will never do with the processes now resorted to by them, and the ore within their immediate reach. I proclaim that pure steel free from phosphorus and sulphur is exclusively to be had from Swedish Lapland. The result is that with the mountain in labour in 1879, the mouse of 1861 has come forth, or in plainer terms,

the steely iron plate of October, 1879, is not a whit better than the common Swedish iron exhibited in 1851.

Little Tower-street, Oct. 14. WM. JOSEPH THOMPSON.

INSTANTANEOUS STEAM GENERATION.

SIR.—The instantaneous generation of steam is admitted to have many advantages in certain cases, but hitherto obstacles have been encountered which have prevented the general adoption of boilers of this form. It appears, however, that working engineer of Paris—Mr. C. M. Bathias—has now succeeded in producing a boiler which works quite satisfactorily. The steam is instantaneously produced in a tubular apparatus immersed in a metal in fusion, as lead, or in any liquid, as oil, which protects the metal against the heat of the fire-places. The inventor remarks that the production of instantaneous steam would have an invaluable importance from a triple point of view—the quickness of obtaining pressure, the diminution of the volume of the generating apparatus, the economy of fuel, and would admit of many applications which the now used boilers have not allowed to realise, amongst others, utilising steam to light vehicles on roads or in streets. Essays formerly made consisted in putting the generating tubes into direct contact with the fire-places; which resulted in complete failure. The tubes nearest to the combustible disintegrated rapidly, and those sometimes placed a little further off, affording a calorific power almost insignificant. In other terms the solution was twofold defective, either from the point of view of generating steam or from the point of view of the durability of the material.

It has been ascertained by Mr. Bathias that by plunging a serpentine tube into a vessel containing any liquid, as for instance oil boiling at 230°, or any molten metal, as amongst others tin or lead, which melt at 220° to 335°, and by placing such vessel in direct contact with the fire-places, the calorific transmission will be consequently powerful. It will, moreover, be regular, as the liquid or the molten metal in the vessel will transmit the calorific power to the remotest tubes as well as to those nearest to the combustible. The calorific power, therefore, will be distributed in very advantageous conditions for obtaining from the combustible the greatest effect, and moreover the tubes plunged continually into a bath will be protected indefinitely against any deteriorations being the immediate consequence of the contact of incandescent fire-places with the metals. To these advantages—better utilising the calorific power and preserving of the generating apparatus—may be added by this arrangement the possibility of increasing or diminishing instantly, as required, the pressures in the boiler. And for this purpose the firebox, which is of a conical shape, as also the sides of the receptacle, in the interior of which it is placed, is made movable. If, therefore, the fire-place is lowered instantly, the pressure is diminished, and the converse. For such purposes as tramway traction, and where a limited quantity of power is required, the instantaneous generation of steam would be very important, as very little space would be occupied and the whole apparatus would be well under control.

Boulevard Malakoff.

MECANICIEN.

ROCK BORING MACHINES FOR METALLIC MINES.

SIR.—There are few instances in which any general improvements in important industries can be effected without encountering formidable obstacles. This fact applies to the introduction of boring machines. It is not long since it was considered by very able engineers and practical miners that the difficulties in the way of driving levels, tunnels, &c., and sinking shafts by the aid of machines to drill the holes for blasting were so formidable that they were not likely to be overcome. And so general was that opinion that, with very few exceptions, for a time the hopes of those few who saw the importance of the introduction of the rock drill were put to the severest test. A comparatively short time, however, has sufficed to open the eyes of the mining world as to the general revolution in mining the rock drill is destined to produce. And to a very great extent the doubts and prejudices of the most sceptical have been removed as to the general fact that such machines can be applied to more or less advantage; so that now the question, as a whole, stands with the general public in a totally different light from that in which it stood a comparatively short time since. The fact that they can be applied, and that to advantage, is I believe generally acknowledged. The rapid progress that has been, and is still being, made in the driving of levels, tunnels, &c., by the assistance of hole drilling machines clearly demonstrates their importance. It is but fair, however, to such machines to consider whether the whole of the improvements are really due to them in the matter of extraordinary distances driven beyond that of hand labour; or whether there are any other aiding influences and power combining with them to produce such, as before stated, extraordinary results. And although I am not seeking, it must be quite clear, to lessen the true merits of drills generally, yet there can be no question that a large portion of the extraordinary progress made where they are used must be due to the powerful explosives used, and that the drills can only claim a part of the merits. This must be admitted in all fairness.

The rock drill, while it may fairly be regarded as having been established, so far as that goes, cannot yet be regarded as having been generally introduced. In fact the number of rock drills in use are comparatively few indeed when compared with the eligible operations where they could be applied to advantage. Of course there are very formidable reasons why, but I do not state in many instances they are good ones. The cost of their introduction is great under most circumstances, which is a great barrier, and it is to be feared unless it can be reduced will continue to be so. Under these circumstances it is unquestionably a matter of vital importance that of reducing the cost of drills, compressors, &c., in order to let loose on mining generally, and other operations, the enormous benefits that are wrapped up in them, but which, on account of the cost, may almost be said to be kept in abeyance as regards their introduction. I admit the perfect right of inventors to charge the public for the use of their inventions; but, at the same time, state that the cost of the introduction of boring machines is too great, in a general sense, to meet requirements, and hope the great obstacles on this account will be smoothed down, so as to admit of progress.

Leaving the general question, and confining my remarks for the present to one or two particulars connected with the subject, and its more economical application, I need scarcely state that wherever water-power can be made available to compress the air that drives the drills, it should be done on account of the great economy that it effects. (The driving the drills by compressed air is understood throughout.) When a steam-engine has to be erected for this purpose it becomes an expensive matter as a rule, involving the cost of enginemen, &c. Circumstances must govern the case. Much expense can be saved sometimes where there is a pumping engine employed which has spare powers, by doing away with the compressing engine, &c., at surface and the pipes required to convey the air down into the mine. This is accomplished by connecting the compressor to the main rod in the shaft. As, however, much depends on the manner the connection is made to the rod, in order that it may be efficient, it is necessary to explain the case. When pumping is performed by a rotary engine, which does not alter the stroke in the shaft as to length, there would be little difficulty in fixing a compressor to work one uniform distance from end to end of its cylinder, and thereby deliver the full stroke of air. That would be simply taking a fixed length of stroke for the piston of the compressor from a fixed length of stroke of the main rod. In the event, however, the rotary pumping-engine, as they often have, should be adapted to change the length of stroke in shaft. A fixed length of stroke for the compressing piston would have to be extracted from a main rod having varied lengths of stroke. The same thing would have to be done in case a direct-acting pumping-engine were at work, for although this kind of engine may be said to travel over the same distance it does not really do so, but varies in that respect, so that in the case of the direct-acting, as well as the essentially varying stroke rotary engine, an absolutely fixed length of stroke for the piston of the compressor would have to be extracted, or in both cases a certain length stroke, and fixed, taken from uncertain lengths of stroke of the main rod, and this can be correctly and easily done.

The advantage of doing away with compressing-engines at surface, and expensive piping leading down into the mine, might in many in-

stances greatly lessen the total cost of the appliances connected with the introduction of boring machines, and thereby enable them to be put to work in many mines when otherwise the adventurers might not be willing to incur the larger expense. The cost of thus applying air-compressors to drive rock-drills would be much less than usual, and in the working the compressors themselves would be most likely more economical than if driven by separate steam-engines at surface.

GEORGE RICKARD.

ELECTRIC MOTIVE POWER.

SIR.—It seems to me, especially after the experience gained in the attempts now going on to produce an economic electric light, that the proposition to convert electric force into motive power is much like trying to make the cart propel the horse; yet even so well known a telegraph engineer as Mr. Theophilus Varley has permitted his name to figure with that of a Birmingham gentleman—Mr. Henry Port—in connection with an invention for this purpose. And what is still more remarkable is that they propose to use a galvanic battery to produce the electric force.

In converting the electric force into magnetism, and ultimately into motion, a magnetic battery is used composed of a number of electro-magnets which attract an armature when an electric current is passing, and the armature is drawn away from the magnetic poles by a spring or weight as soon as the electric current ceases, and the induced magnetism has died out—they have rather an ingenious arrangement for neutralising the induced magnetism in the iron cores, but this need not be described. To a slab of iron they fix, in arranging the electro-magnets a number of short electro-magnetic bobbins made in the usual way (an iron case wrapped with insulated copper wire). The other ends of the numerous electro-magnetic bobbins form the active poles, which from their number present a large attracting surface to the moveable armature, and which attracting surface is still further increased by fixing a plate of iron upon each of the active poles of the electro-magnetic bobbins. These bobbins are grouped side by side on the before mentioned slab of iron in as compact a form as possible, over against, and to be actuated by, the poles of the electro-magnets; the armature is formed of a slab of iron sufficiently large to cover the whole of the active electro-magnetic poles; this armature is pivoted on one side to move hinge-wise, or by means of guides made to move perpendicular to the plane of the magnetic poles' surface; this armature actuates a cam or crank, cams or cranks, of a particular form, and multiplies or increases the motion of the lever which is attached to the cam in similar ratio to the curve of magnetic attraction. Thus when the armature is farthest from the magnetic poles, where the attraction is least, the cam lever motion is but small, and as the armature nears the poles of the magnet where the attraction is greatest, the cam lever motion is multiplied considerably, and so conveying an uniform force, but of accelerating speed to the wheel or machinery to be set in motion.

The battery and induction plates are connected and disconnected to the electro-magnets' helices by means of commutators actuated by either the armatures themselves, machinery itself, or a combination of both, to insure a regular stroke and a disconnection at the proper time; the battery is to magnetise the electro-magnets and the induction plate to wipe out or neutralise the residual magnetism of the iron cores. The commutations are, when the armature is distant from the poles, the current from the galvanic battery is made to pass through the helices of the electro-magnets, and the induction plates magnetising the iron cores, and polarising the induction plates, the armature is attracted towards the poles of the magnets, but before arriving the electric circuit is broken, and the induction plates or induction battery is connected to the magnetic helices, causing a current to flow through the helices, but in the opposite direction to that of the galvanic battery, and so neutralising the magnetism left in the iron, called the residual magnetism; these commutations of the battery current and that from the induction plates, is repeated to each stroke of the armature towards the poles of the electro-magnets.

That Messrs. Port and Varley's arrangements are ingenious, and that they obtain some advantages as compared with other arrangements, I do not doubt, but I should like Mr. Varley to state whether he, as an electrician, really believes that considering the quantity of fuel employed to produce the materials for a galvanic battery, the difficulties and loss of converting battery power into motive power, and the non-reliability and non-storability of electricity, it is reasonable to hope that the use of motive power obtained by the conversion of electrical force into it could ever be commercially remunerative.

Birmingham, Oct. 6.

NEMO.

MOUNT BISCHOFF TIN MINING COMPANY.

SIR.—A few statements concerning this company may prove interesting at the present time. The total quantity of tin ore raised since its formation, six years ago, is 6648 tons. The following will show particulars of the past six months' working from Jan. 1 to June 30:

	Tons cts. qrs.
Details of monthly yield, Jan., 1879	228 16 3
" " Feb., 1879	55 16 2
" " March, 1879	30 9 3
" " April, 1879	235 7 3
" " May, 1879	250 0 0
" " June, 1879	250 0 0

Total raised for six months 1050 10 3
The falling off in February and March is attributed to a scarcity of water for dressing purposes.

Total quantity of ore smelted for six months:—

Tons cts. qrs.
On account of the Mount Bischoff Mine... 1005 1 2
Purchased ore... 458 12 0
For the public 60 5 3

Total tons 1523 19 1
Producing tin..... 1062 tons 11 cwt. 2 qrs.

Working account, June 30, 1879:—

CR.—By 1050 tons 10 cwt. 3 qrs. tin ore, obtained during the six months, at 30/- per ton. £31,516 2 6

DR.—Wages, salaries, stores, directors' fees, &c.... 14,986 2 6

Profit £16,530 0 0

Profit and loss, June 30, 1879:—

CR.—balance, Dec. 31, 1878.... £14,045 9 6
Working account 16,530 0 0

Tin 2,943 10 11 £33,519 0 5

DR.—Dividend No. 7..... £ 6,000 0 0

Dividend No. 8 6,000 0 0

Furnace plant, &c..... 100 0 0

strong protest on the part of the shareholders, and this must be successful be immediately done by those who are of the same opinion as—
AN ORIGINAL SHAREHOLDER.

CENTRAL RAILROAD COMPANY OF NEW JERSEY.

SIR.—Allow me to draw your readers' attention to the ordinary shares and the Seven per Cent. Income Bonds. The total capital of the ordinary is £20,600,000, and the price 71 to 73. The whole amount of the Seven per Cent. Income Bonds is 490,000*l.*, which requires only 34,300*l.* per annum for interest, and they are quoted 82 to 84. The Seven per Cent. Income Bonds are intrinsically worth 100, as they receive dividends in full before anything can be paid to the ordinary shares.—*Oct. 15.*

B. E.

THE FLAGSTAFF SILVER MINING COMPANY.

SIR.—By recent advices from the United States it seems that the litigation so long pending in judgment on this valuable property is now about to close in favour of the company, and the Flagstaff Mine will shortly be again in the possession of its rightful owners, the law expenses, &c., being, it is said, paid for out of a reserved percentage on the accumulated proceeds of the mine, which has been returning from £200,000 to £250,000 per annum, clear profit for upwards of two years, and is now reported richer than ever. Large orders, it is stated in the City, have been sent over from New York within the last few days to buy up the shares in the English market, the original price of which was 10*l.* each.—*London, Oct. 13.*

OBSERVER.

NEW QUEBRADA MINE.

SIR.—After a considerable period the promise made by the Chairman at the last meeting of this company, that a monthly report should be issued, has been so far fulfilled that a post-card has been sent out stating the output, percentage, and price of the ore for July—a very small modicum of information, and something like promising bread and giving a stone. But the shareholders want not only to know this, but what is more important, they want and are entitled to have a monthly report of the state of the mine and other particulars, as furnished by the agent at the mine, published in the *Mining Journal* for general information, and which if they do not have the shareholders will certainly consider most unsatisfactory, and with me will, no doubt, feel much—
DISSATISFIED.

Oct. 15.

COLOMBIAN HYDRAULIC MINING COMPANY.

We have been asked to publish the following correspondence relating to the Colombian Hydraulic Mining Company:

Laurence Pountney-lane, London, Sept. 17.

DEAR SIR.—As Mr. Welton's report of July 19 last clearly shows that it is undesirable, if not entirely impracticable, to proceed with the plan of operations at the mines contemplated by the directors at the time of the formation of the present company (and which had such an intimate relation to the scheme of amalgamation of the original companies that was then recommended to the members and agreed to by them), I now write to ask whether the board intends to call a meeting of the shareholders forthwith, to take into consideration the altered position and the future conduct of the company? I have to request that you will at once bring this letter before the directors, and at the same time I beg to refer them to my letters upon the subject (which I have no doubt all, or some, of them have already seen) that have appeared in the *Mining Journal* of 18th and 23rd ult., and 13th inst. I did not think, or imagine, that Mr. Welton's own advices would so soon and so completely have vindicated the correctness of the views I have expressed, and the necessity for the adoption of the course I have advocated. Upon the nature of the early reply to this letter, which the board may instruct you to make, will depend the further action that I may feel called upon to take in reference to the important and critical circumstances to which I have thus far directed attention.

Mr. S. A. Cobbett, Secretary, Winchester House.

Winchester House, Old Broad-street, Oct. 1.

DEAR SIR.—I am instructed by the directors to state that at their meeting yesterday your letter of the 17th inst. was brought before them. It is very evident to them that you have misunderstood the report of Mr. Welton, to which you refer, inasmuch as there has never been and there is not now any intention whatever of abandoning the bringing in of a deeper sluice at Malpaso. On the contrary, every necessary preparation is being made for its commencement at another point as soon as the exact position of the deepest part of the channel (which is now being cut across) shall have been ascertained, and the mail that arrived on the 9th ult. brought the directors particulars of the expenditure that had been incurred on the new opening during the month of July.

Such being the case, and the position of the company having been so recently laid in detail before the shareholders at the meeting on August 7, and a report of that meeting having been put into the hands of every shareholder, the directors fail to see that there is the slightest necessity to call another meeting.

I have only to add that the directors feel that it would be impossible to find a man better fitted than Mr. Welton by his knowledge of hydraulic mining, and by his acquaintance with the customs of the country and the language of the people, for the position of superintendent, and they feel assured that he is doing the best that can be done for the interests of the company, in the success of which he himself is largely interested.

SYDNEY A. COBBETT.

A. Gray.

Laurence Pountney-lane, London, Oct. 9.

DEAR SIR.—I extremely regret that the directors should have instructed you to reply to my letter of the 17th ult. in the terms of your letter of the 1st inst. I.—The statement therein that I have "misunderstood the report of Mr. Welton" is quite gratuitous and unfounded. But your letter certainly affords fresh evidence that the directors are resolved (and this is really what I have ventured to feel and express a rather decided objection to) to allow Mr. Welton still to continue, at the shareholders' risk and expense, those experimental operations at the Malpaso Mine which have already proved so costly and unremunerative; and it is precisely because this is being done by the original vendor of the property, and with the proceeds derived from the sale of the one valuable asset of the late Malabar Company, that I think the shareholders should be afforded an opportunity of passing an opinion upon the matter before it is too late.

2.—As to the position of the company having been so recently laid in detail before the shareholders, the report of the meeting to which you refer (which was only the statutory one) is itself sufficient to show how few were the "details" then submitted. But, and this is the important point, Mr. Welton has since then distinctly advised that to proceed with the work at the point then being operated upon "would be certain to absorb the last resources of the company," and, at fresh cost, yet another experimental opening is now being proceeded with. I have said nothing of any "intention," but if this is not a change of circumstances calling for the prompt and careful consideration of the shareholders themselves I can conceive of none, and we may as well resign ourselves as best we can to the blind and helpless position in which it would indeed appear we are.

3.—As to the last paragraph of your letter, I have only to add "that" it is quite beside the mark. Mr. Welton may be the "Admirable Crichton" the directors believe him to be; but so far it unfortunately happens that none of his original reports upon any of the three properties of the company have been verified, and the results hitherto of his own management of one of them have been simply disastrous.

I for one at least, and I know I am expressing the views of other shareholders, must not now shrink from recording my emphatic belief that by declining to bring the existing critical circumstances of the company before the shareholders in general meeting, or to afford them the occasion of obtaining an independent and reliable report both upon their property itself and upon Mr. Welton's management thereof, which (I repeat) the shareholders may now have an opportunity (probably the last) of acquiring, the directors are most seriously imperilling the remaining interest of the unfortunate shareholders of this amalgamated and handicapped company.

As it would involve considerable expense and also much time and inconvenience for me to communicate directly with some 600 or so of my fellow shareholders, I shall send my former letter and the present one, together with the board's communication of the 1st inst., for insertion in the *Mining Journal*.

Mr. S. A. Cobbett, Secretary, Winchester House.

A. Gray.

Winchester House, Old Broad-street, Oct. 17.

Dear Sir,—In reply to your letter of the 9th inst. I am instructed by the directors to say—

1.—That you have evidently overlooked the fact that the work now being carried on at the Malpaso Mine, although to some extent experimental, is yielding returns sufficient, within a few dollars monthly, to cover the cost; and that, consequently, the position of the company is not being prejudiced by its circumstance. Your statement that this work is being carried on "with the proceeds derived from the sale of the one valuable asset of the late Malabar Company" is, therefore, entirely at variance with the facts.

2.—I have to repeat that the circumstances which rendered it inexpedient to postpone the new opening at Malpaso at the point originally selected have been fully placed before the shareholders who, the directors venture to believe, will scarcely blame their superintendent for hesitating to commence any work which, in the event of a certain contingency arising, "would be certain to absorb the last resources of the company."

3.—With reference to your singular statement that "the results hitherto of his own (Mr. Welton's) management of one of them have been simply disastrous." I have merely to state that since Mr. Welton took charge of the Malpaso Mine in April, 1878, the gross returns have been £1,241*l.*, obtained at a cost of 10,503*l.*—a result which the directors venture to think can scarcely be called "disastrous." As the only material outlay which has been incurred since the meeting of shareholders has been for the new opening at the Malabar Mine, there is absolutely nothing to warrant your reference to "existing critical circumstances of the company." Should any such circumstances arise you need have no fear but that a meeting of shareholders would be at once summoned. With reference to obtaining a report upon the mines, it was pointed out to you at the general meeting that your proposition to send out an English miner to report on a gold mine worked by a process with which he must necessarily be unacquainted would be worse than useless. Such a report, to be of any value, could only be made by one who possessed the requisite technical knowledge of the subject. To send a competent man from England (could such an one be found) or from California would necessitate an outlay which would materially cripple the company's resources, and would not, the directors believe, result in any benefit.

In conclusion, I have only to say that the ultimate result, success or failure,

so long as the shareholders continue to honour them with their confidence, so long will the directors continue to do whatever they believe to be for the best interests of the company, regardless of any such attacks, as unwarrantable as they are unfounded, which for reasons best known to yourself you may continue to make upon them.

A copy of this letter is forwarded to the *Mining Journal*.

SYDNEY A. COBBETT.

THE PANULCILLO COPPER COMPANY—A PROMISING UNDERTAKING.

SIR.—With the great rise in metals more attention is deservedly paid by investors and speculators alike to mining securities, but this is often done very injudiciously. Whilst some mining securities have actually risen 200 to 500 per cent., others are not materially, at any rate proportionally, higher. The Panulcillo Copper shares may be cited as an instance. They are being bought up by a few well-informed people quietly and unostentatiously. This buying has pushed them up to 3*l.*, yet this rise is after all only an instalment of the advance in store for them when the public shall commence to take them up. And this cannot fail to occur very soon—so soon, in fact, as the information, now a monopoly of a few, shall become widely known. The report of the directors, to be presented to the general meeting of shareholders early in November, either now is or else will be soon in the printer's hands, and shareholders before parting with their shares at the present low prices will do well to wait for the report, and, indeed, until after the meeting.

On the basis of information in my possession, and which cannot but be confirmed both in the report of the directors and at the coming meeting, I unhesitatingly aver that the Panulcillo Copper Company has a very brilliant future before it, and its 4*l.* shares, instead of being at a discount of 25 per cent., should be at a premium even now, and will be so ere long. A few figures only will suffice to evidence this. The debenture debt of the company, originally 80,000*l.*, is being rapidly extinguished. In 1876 it was still 65,000*l.*; but last year it had already been reduced to 48,000*l.*, and this year a further and material reduction will take place. The wiping out of this debt alone would mean in itself a substantial dividend to the shareholders; but it should be remembered that the company has earned a considerable amount in excess of all expenses, the interest (paid, under discount, to the end of 1879) and redemption of the debenture debt included.

The low price of copper during the past year notwithstanding, the company has made on the twelve months ending June 30 a profit of about 24,000*l.* and of 17,500*l.*, after deduction of all expenses above mentioned. On a share capital of 200,000*l.* this means a dividend of 8*l* per cent. But the above net profit will be considerably increased in the current year by the great rise in copper. According to the last advices from Chili the company during the quarter ending Sept. 30 have sold their copper fully 50 per cent. above the average price made during the year ending June 30.

I would simply draw the attention of shareholders to the above figures, and also to the statements in the mining report of Mr. Welsh, dated Panulcillo, July 31, 1878, about the condition and prospects of the mines, but particularly about the enormous reserves of copper therein contained, and then I must leave it to them whether they will sell their shares at 25*s.* per cent. discount.

Oct. 15.

A PERMANENT SHAREHOLDER.

CANADIAN MINING NOTES.

SIR.—The market throughout this continent as far as minerals are concerned, and I might say everything else, seems to have revived, and, as a consequence, mining has taken a start also. This action has not yet invaded Canada, although I hear from a friend of mine in the States that "mining is booming," which means there is a rush for mines. "Booming" is a Western term applied to rivers when they rise suddenly in the spring, and, therefore, to markets. They will soon commence to "boom" in Canada, though our people are like what "Sam Slick" says about the Nova Scotians—more inclined to contemplation than otherwise.

From the Lake Superior region we have news that the McKellens have struck a rich find in gold near Pic River, not far from the Copper Location. They are good explorers, and will undoubtedly be able to realise well in case they find something very good. This vein at Pic River is said to assay \$1000 in gold, besides copper.

In Nova Scotia they are doing well, it is said. At Mamora, in the county of Hastings, Ontario, they are said to be making \$1600 a week at the Freigburgh Mine with a few men, and at Harbour Grace, in Newfoundland, they have a gold excitement also.

Ontario appears to be the richest province if the Government go to work and open the mines, but they are too slow, and although they do everything for agriculture and short horns, &c., they leave the mineral part of the province to take care of itself. If the Commissioner of Lands would turn his attention to the wealth which has sprung from developing mines in Sweden, Norway, and Germany, he would find that minerals were not so despisable as he seems to think. Governments appear to consider they are only made to restrain the people, and not to open the resources of the country. However, our chief revenue comes from the Land Department, and when all the timber limits are sold and the timber cut, and there is no revenue, then the Government will begin to think they might find a revenue in opening up mines and licensing them.

We have had at Ottawa a Dominion Exhibition, and the mineral display has been remarkable for its excellence. The luncheon that was given at Ottawa will have an interest for Englishmen, as it will show the kindly feeling existing between Canada and the United States. While your people look on America as a whole, we look on North America as two distinct nations. They are friendly nations, and respect each other perhaps more because they are separate than if they were one. Thus the beginning of the autumn looks much brighter on this side of the continent in 1879 than it did in 1878.

Toronto, Sept. 26.

BOURNONITE.

LLANIDLOES DISTRICT, AND MINING DEPRESSION, &c.

SIR.—A short time ago there appeared in your valuable *Journal* a letter under the above heading, signed "Trefeglwys," and being connected with the mines in the district referred to I was rather surprised to learn from it of the existence of such prospects of so valuable a mine in my immediate neighbourhood, and I concluded that the writer had been a little too sanguine in his expectations. However, a week ago I walked over and judged for myself, and I must admit my astonishment at what I saw taken from the same spot, I presume, as that referred to by "Trefeglwys," which were some very magnificent lumps of lode matter, nearly all of which contained a quantity more or less of lead and blonde ores taken from the back of the lode on the brow of the hill. I am constrained to admit that my stroll that day was one of no mean pleasure, as I saw what I fully believe will lead to another source of wealth to this already charming fruitful vale of Trefeglwys.

People these days go a far way to see Nature in its rugged form, others go to see slightly undulated and wooded vales, with a fine river sweeping in a serpentine manner, and murmuring its song in its onward course to the sea. I may say, for the benefit of such of your readers as are fond of studying Nature in its different phases, do not die if you can help it without paying a visit to the Vale of Trefeglwys, traversing it from the Cambrian Railways at Caersws up through the romantic vale of Llawn-y-glyn as far as "Jack-y-Mawn's" hostelry, which is the most ancient hostelry in the kingdom, and also ancient and warm-hearted hosts, where you will get plenty of "Bara caws and Cwrvda," and possibly an appetite for it before you get there. A few days walking tour around this part will well repay anyone who is blessed with a good constitution for climbing to the many interesting spots which abound, and to have a view of the whole country; while for those who are interested in mining it forms a great attraction, as it is traversed by network of lodes, which in some instances have proved themselves very rich for minerals—the Van, Penclyn, Van Consols, and other mines in the district which have every indication of success in the immediate future.

The mention of those three mines brings to my mind the name of the late Mr. Gell, the first to discover Penclyn Mine, which for many years was the pioneer mine of this county, the discovery of which and the success attained in its working led ultimately to the

discovery of Van Mines, which, thanks to the indomitable courage and energy of the present manager, has been all along a wonderful mine, and by what I hear seems likely to continue so for many years to come. Mr. Gell had a high opinion of this district, and north-east of Van from the top of Llawn-y-glyn towards Trefeglwys, and beyond, comprising within its area the discovery alluded to by your correspondent recently made; this Mr. Gell was looked upon in his time as if he had (what shall I call it?) an instinct for discovering mineral lodes, which is not always possessed by our cleverest mine agents. Some very wonderful stories are now fresh in the memory of some of the oldest inhabitants of his ability in that important branch of mining. For in that as well as cooking the *sine qua non* is first catch your hare, and in that Mr. Gell excelled to a high degree. Copper has also been found in the upper part, and mudiic, which from its appearance I should think ought to contain a large percentage of silver. I intend to have some of it analysed shortly. While on the matter of copper, I felt very gratified to see an allusion made in last week's *Journal* of the Glaslyn Consolidated Mines, knowing as I do a little of the early history of these mines when worked for copper alone, and from that knowledge I feel justified in predicting a long and successful career for them if properly and energetically developed: their position for cheap and expeditious development is unparalleled. Dividends were paid from these mines under far greater disadvantages than will ever have to be encountered again. More about these mines and others in their vicinity in a week or two, and I may add in closing this letter I have no doubt but that your esteemed correspondent, "Hopeful," will ere long hear good news from Trefeglwys about the new discovery near the village that he bears the name of.—*Oct. 15.*

MINER.

TREATMENT OF TIN ORES.

SIR.—I am sorry to see that Capt. Charles Thomas is so much disappointed with my last letter. All I can say in reply thereto is that from the commencement of this correspondence up to the present time one object only has been in my view—to try to improve on the system of tin dressing now in universal use, so that more tin may be had from the same quality stuff, with less cost. I am not trying to puff a patent in order to make money, neither do I wish to cram ideas down people's throats which they do not wish to believe, although if this could be done sometimes I think it would be beneficial to the mining community at large. Surely practice should be placed before theory. Capt. Thomas ignores a thing which he has never seen tried, and has no conception of what it is like, therefore instead of the writer being personal, which is far from the case, the boot is on the other leg.

Throughout all the controversy on this important subject Captain Thomas has never answered one principal point in my first letter, but has simply contented himself by clinging to the round bubble as perfect. Why not give any process a trial before condemning it? If this were the motto of Cornish mining, doubtless many improvements would now be in existence which otherwise will, perhaps, never come to light. Captain Thomas again summarises the jigger as making a complete but entirely useless separation between slimes and roughs, and once more I must tell Captain Thomas the jigger does nothing of the sort; it certainly is a great pity that Captain Thomas does not try to thoroughly understand the working of the jigger before making use of such erroneous statements. In conclusion, I may add that we have been driving the jiggers from the end of the stamps axle, and so satisfied are we with its results and superiority over the round bubble in front of the stamp that we have commenced to erect a steam-engine to drive them.

WHEAL JANE, Oct. 15.

METALS, MINERALS, AND MINING.

SIR.—The advances in prices of metals and minerals directly affect for good or evil the very backbone of trade, manufacture and commerce. Only one month ago the mental gauge of business in metals and minerals was "depression"; to-day it is not amiss to aver that it is "confidence." How long this gleam of sunshine will last it is premature to judge, for as yet it is a simple ripple on the surface; yet it breathes hope and inspires confidence in the future. Some of the rises in prices are purely speculative—hence the merest gust of an adverse movement will explode those hollow and unstable dealings. This is exemplified in many instances of both mines and industrial undertakings, the shares of which have been wrought up to unhealthy premiums, soon to be reduced in volume far below zero. We could particularise, but for obvious reasons comparisons are unnecessary, and at the same time objectionable.

At the recent audit the profits (16 weeks) at East Pool were 3440*l.*, and a dividend of 9*s.* a share,

would have recouped in a mining sense 172,500*l.* in dividends, while on the financial arrangements there is only that return of capitalised —262,000*l.* It is thus that modern mining is wronged of its importance, for the best of our mines are weighted by modern finance with promotion beyond their real and intrinsic value before the general public are admitted into the arena of action. The coming stars are the Welsh United, which will be rapidly opened by boring machinery with far more than ordinary prospects of success. Grogwinion and North Hendre should advance, as also should Cefn-y-Maes. The local agent, Capt. Douglas, states that he can raise 15 tons of lead a month, and when the works are fairly opened out he can certainly make monthly returns and sales to compete with any other mines in North Wales excepting Minera and North Hendre. The shares, 200*n.* in number, 5*l.* paid, stand at 12*l.* 10*s.* to 15*l.*, and are likely to advance to 100*l.* which is only 20,000*l.* for the entirety.

Cornhill, London, Oct. 14.

R. TREDINNICK,
Consulting Mining Engineer.

WHEAL CREBOR AND BODIDRIS.

SIR.—Mr. Alfred Thomas having, as I presume, no interest in the Wheal Crebor Mine, yet appears anxious that your readers should fully understand his own opinion and that of a person called Miners of that property, but will you allow me as a shareholder to suggest to Mr. Thomas that he might with advantage to your readers give us some independent opinion of his own mine (Bodidris). It is now some two years ago, if I remember correctly, that we were promised a sale of 10 tons of lead ore. But what has become of it? There are 30,000 shares in this company, and they cost many of us 1*l.* 10*s.* each, being at the rate of 45,000*l.* for a mine paying nothing and returning nothing. The despised Crebor, which this Miners acknowledges may at least "make small profits for a short time," is selling at 24,000*l.*, and with as many tons of ore in reserve as there are I fear grains in Bodidris. Will Mr. Thomas or Mr. Miners, therefore, explain to me why there should be such a difference in the price of these two mines?

A SHAREHOLDER IN BOTH.

WHEAL CREBOR.

SIR.—We beg to hand you the accompanying report on Wheal Crebor for publication.—*London, Oct. 15.* EKINS AND CO.

SIR.—In compliance with your request, I have gone underground at Crebor to-day, and have made a long and careful inspection. The 120 west never looked so well, worth fully 90*l.* per fathom. The north side going east towards the winze is worth fully 70*l.* per fathom. The ore part of the lode in the 10*s.* is 10*s.* wide; from the appearance of a branch in the south a great improvement will take place. A favourable change has taken place in the 48 fm. level cross-cut—capel and spots of ore are making their appearance. JOHN GOLDSWORTHY.

Tavistock, Oct. 14.

WHEAL CREBOR.

SIR.—What are your readers to believe in respect to this mine and the recent discoveries in it? I confess I, for one, feel confused with the conflicting reports which are issued from various sources as to its fertility and prospects. On the one hand we have the Messrs. Watsons' report and remarks upon it (which I always feel interested to read, as usually there is something substantial to reflect upon, and often times to profit by when acted upon), and on the other we have a report from Mr. A. Thomas's agent that the mine is likely to cut out poor. It seems to me that, if each agent who has reported upon the mine is honest in his statements, geology and mineralogy require more study and investigation to bring out a truer science than has yet manifested itself, of course assuming that both agents are thoroughly qualified men in point of geological knowledge.

When I come to consider, however, the market operations which appear to have been going on in connection with the shares of this mine in conjunction with the reports issued, I form a different estimate of the latter than I otherwise should if no other motive had been at work than to give a plain simple report of the discoveries, appearance, and progress of the mine. The position and general reliance of the parties who thus report are then to be considered, and in this consideration I certainly lean towards the Messrs. Watson. Their position in the mining world, and the advice they have given in the *Mining Journal* as well as privately, have been such as to warrant faith in their honesty and information. The statement they make in last Saturday's Journal, that "they and their clients hold nearly half of the shares," is to my mind most palpable evidence of their belief in its value, and ought to have that assurance to the other shareholders as to resist all attempts of the "bears" reducing them as was done last week. I believe, when I consider all the facts and circumstances in connection with the mine, that Wheal Crebor is destined to be one of the first mines in the country, and that we shall not be long ere we see it advance to the position it is entitled to.

OBSERVER.

Oct. 15.

WHEAL CREBOR.

SIR.—I have lost money through "bearing" operations in Wheal Crebor, and I would ask publicly whether there is or not a rule of the Stock Exchange which forbids members of that institution from, I will not say "combining," but dealing with defaulters outside? Will some of your readers enlighten me upon this point?

Throgmorton-street, October 16.

A SUFFERER.

SOUTH CREBOR.

SIR.—I am glad to hear that this property, better known by the name of Courtney, which has for some time been worked privately and on a very small scale, is about to be developed more extensively. I inspected the mine some time ago, and was much pleased with the character of the lodes and general prospects. Since then a large quantity of ore has been sold; and if worked economically good profits ought to be made. Its north boundary adjoins the now well-known Crebor; and opinions differ, it seems, on the value of this old property; but I may observe that from private information received from a mining engineer (no way connected with the company) who inspected the mine on Tuesday, he values the lode in the 120 west at 90*l.* per fathom; east of cross-cut in north side towards winze 60*l.* per fathom; in the 108 the lode had fallen off, but indications were good—in fact, the main part was improving. The stope on the south side is in a fine course of ore 8 ft. wide, and will all go to market worth 4*l.* 10*s.* per ton. The cross-cut in the 48 shows signs of a branch or lode being near. It is a pity that property like this should be subject to such fluctuations through the operations of the numerous bears on the market, and it would be well for shareholders to hold their shares.—*London, Oct. 17.* J. COATES, C.E.

MARKE VALLEY.

SIR.—I was glad to see at the last meeting a balance of 940*l.* was shown in favour of the mine. With copper considerably advanced since then and daily advancing it is not surprising that these shares (with 5*l.* paid) should be selling for 30*s.*? when we all remember with prospects not nearly so good they were selling at 3*l.* to 4*l.* per share, at which prices many of us bought. I hope the shareholders instead of being persuaded to sell will increase their holdings, selling (as the mine does now) 250 tons per month. With the advance in copper, together with the improved appearance of the 90, the value of the shares should have doubled before this. I can only account for the price from the fact that a large number having bought in at 15*s.* to 20*s.* are now realising. Let shareholders remember that the present price of shares is no criterion of the real value of their property.—*London, Oct. 16.* W. J. MORGAN.

BRYN GLAS MINE.

SIR.—You have at all times been generous enough to allow me to express a few words relative to the starting of any new undertaking in this district or county, and I doubt not the few remarks appended hereto will appear this week in the columns of your widely spread Journal. As I have known this property for very many years, and have on different occasions examined it, I give you a few facts that may be implicitly relied upon. The pumping machinery will not be at work 24 hours before a good course of silver-lead ore will be

exhibited in both ends of the engine-shaft, east and west; and this course of ore will be found to continue almost from surface to the bottom of the engine-shaft. In the drivage in the bottom and in the stope of that level a much richer course of ore will be found than what the engine-shaft passed through, although that could be worked away at the present price of lead at a tribute of one-half. By continuing this—the bottom level—westward a few fathoms it will form a junction with a very fine vein called the Bryn Werth lode, and at this junction a still richer course of ore may be expected than any worked on. To the eastward, and in very high ground, 200*l.* will be sufficient to see the lode, where it has been found, and may now be seen, rich at surface. So I shall conclude this, as I think any further remarks would be quite superfluous. In my next I hope to send you a few lines respecting Nant-y-Moch, which has been registered with a capital of 10,000*l.*, in 1*l.* shares. ABSALOM FRANCIS.

Goginan, Aberystwith, Oct. 14.

R. TREDINNICK,
Consulting Mining Engineer.

BRITISH SILVER-LEAD MINES.

SIR.—I have much pleasure in calling the attention of capitalists to this highly mineralised property, situated near Blaenan, Festiniog Station, from whence a railway passes close to the washing-floors, thus affording every facility for inspection, and conveyance of ores from and materials to the mines. I have carefully examined the sett, which is very extensive, and traversed throughout by powerful, strongly mineralised, and well-defined lodes; and there is every indication that with energetic development one of the richest mines in Wales will be opened out. The south lode has been stopped for a considerable distance in the present end of stope, and the trial pits for several hundred yards west are to be seen a rich lode, having all the accompaniments of extensive runs of ore. The lead ore and blonde are rich in silver, and as the markets are advancing, and large quantities can be raised, good profits will be made. The capital is 20,000*l.*, in 10,000 shares of 2*l.* each, and the lease is for 21 years, at a dead rent of 10*l.* per year, merging into a royalty of one-fifteenth.

Greenfield House, Wrexham.

JOHN L. M. FRASER,
Consulting Mining Engineer.

A LOST PROPERTY.

SIR.—Shakespeare saith, "What is in a name, a rose would smell as sweet by any other." This old saying does not hold good in mining, at least not in this particular case I am about to bring under the notice of your readers. As long ago as 1873 I became a shareholder in a company which then was considered a most promising undertaking, but like many other such properties it has undergone changes, the last, though not least, being the reorganisation of the company with change of title, for what was then known as the West Tankerville Mining Company (Limited) has been metamorphosed into the East Roman Gravels Lead Mining Company (Limited). And though formerly a large business was done in the shares at a considerable premium, they are now scarcely negotiable, although a large amount of dead work has been executed, the shaft sunk many fathoms, the royalty considerably reduced, and the monthly returns of lead maintained throughout the depression we have lately passed through. The capital is now only 30,000*l.*, and I believe there is a fair balance in hand. I would here suggest to the executive that they should seek power to alter the name to the West Tankerville Lead Mining Company (Limited), or some such title, which would satisfy the Registrar of Joint-Stock Companies. I am certain that this property is one of the best progressive mines in the kingdom.

A SHAREHOLDER.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week the markets have continued active, and the upward tendency of prices shows no uncertainty, as any fall caused by realisations to secure profits or otherwise seems at once to attract fresh investors. The Board of Trade Returns for September are remarkable for the great improvement they show in the exports caused by American and Canadian purchases, especially of iron and steel goods. As this is a demand likely to continue, the great activity thereby stimulated in these particular trades must extend to other departments of trade, and clearly marks the arrival of the long looked for in general trade. There can be no mistake that the metal trades have already entered upon the career of prosperity that may thus be confidently anticipated, and prices of mining and metal securities are bound to rise greatly, being far below what they would command in ordinary times. The usual fortnightly settlement was a very heavy one, and has been satisfactorily arranged, although a considerable amount of speculation for the rise was disclosed, and the account for settlement Oct. 30 opens very firm.

In shares of coal and iron companies a large business continues to be done. The principal movement in prices during the week are advances of 5*l.* per share on Nant-y-Glo and Blaina pref., 10*s.* on Bolckow, Vaughan, A. 7*s.* on Clyde Coal, 6*s.* on Marcella, 5*s.* on Glasgow Port Washington B. 3*s.* on Benhar, 2*s.* 6*d.* on Monkland Iron pref., 2*s.* on Omoa and Cleland, and 1*s.* on Monkland ordinary; while Chillington is reduced 7*s.* 6*d.*; Locoore and Capledrae 6*s.*, and Glasgow Port Washington A. 5*s.* The coal and iron trades show continued and unmistakable signs of a great revival. The demand for iron on American account is well maintained, and the fact that pig-iron is retaining so much of the recent rise proves there must be a good trade demand. The best informed men in the metal trades do not consider this any temporary spurt, as trade in America has received an enormous impetus from their prosperous harvests, combined with an increased European demand for their grain. They are, therefore, undertaking the renewal and improvements of railroads on a more liberal scale, besides building new roads. Some parties think it will be best for iron to recede a little in price, in order to encourage purchasers; but there are other considerations here involved which must be kept in view, especially quality. The most important point is that we should continue to produce cheaply, for as long as we can sell under American ironmasters it is evident the higher prices go there so much the more profitable will the trade be here. Coals are also rising faster in America than here, so that if orders continue to do so the ironmasters there will be at a disadvantage, and orders would require to be sent to this country.

Benhar shares have fluctuated from 2*s.* to 2*s.* 10*s.* this week, and are very firm, having made a further advance upon the price of their coal. The Shotts Iron Company's miners have got their wages advanced three times 6*d.* per day since the advance in the price of pig-iron without requiring to ask for it. The sharp rise in Nant-y-Glo and Blaina (pref.) is explained by their furnaces and all the remaining mills and property being leased to some wealthy capitalists, by whom operations will be commenced at once. It is said the Bilbao Iron Ore Company have made some heavy contracts with the United States, and that the greatly increased demand for best hematite and rise in prices has greatly improved their position. Steel Company of Canada shares offered. Andrew Knowles and Sons are at 10*s.* Bilbao, 12*s.*; ditto, pref., 25*s.*; Bolckow, Vaughan, A, 6*s.* to 6*s.*; ditto, B, 11*s.*; ditto, stock, 35*s.*; ditto, 5*s.* per cent., 19*s.*; Cairnitable, 7*s.* to 7*s.*; Charles Cammell and Co., 10*s.* 6*d.*; Clyde Coal to 7*s.*, and have since recovered to 5*s.*; Chillington, 8*s.* 6*d.* to 8*s.* 4*d.*; Chapel House, 25*s.* to 35*s.*; ditto, pref., par.; Cardiff and Swansea, 20*s.*; Ebbw Vale, 6*s.* to 7*s.*; Glasgow Port Washington, A and B, 7*s.* to 8*s.*; Great Western, 35*s.*; John Bagshaw and Sons, 25*s.*; John Brown and Co., 25*s.*; Locoore and Capledrae, 23*s.* to 25*s.*; Marcella has fluctuated between 3*s.* 6*d.* and 2*s.* 10*s.*, and have recently had an upward tendency. Monklands, after falling to 5*s.*, rose to 6*s.*, and the guaranteed preferences have sold from 5*s.* to 6*s.* Mersery, 4*s.* 6*d.*; Muntz's Metal, 12*s.*; Nant-y-Glo and Blaina, pref., 26*s.* to 30*s.*; Newport Abercarn, 5*s.*; New Shariston, pref., 5*s.*; Omoa and Cleland, 22*s.* to 25*s.*; Parkgate, 8*s.* 6*d.*; Pelsall, 7*s.* 6*d.*; Rhymney, 21*s.*; Scottish Australian, 37*s.* 6*d.* to 40*s.*; Shoots, 7*s.* to 7*s.* 2*d.*; Staveley, A, 14*s.* 6*d.*; ditto, B, 40*s.* prem.; ditto, C, 7*s.*; Sheepbridge, 19*s.*; Sandwell Park, 14*s.*; South Wales, 50*s.*; Thorp's Gawber Hall, 20*s.* to 40*s.*; Tredegar, B, 19*s.*; Ulverstone, 60*s.* to 80*s.*; West Cumberland, 10*s.*

Shares of foreign copper and lead companies have continued in good demand. There has been an active and large demand for copper, which is likely to continue to advance the price of that metal.

The returns of the Cape Company for August have been 108*s.* tons in all. The accounts of the West Prussian Company show that after paying the preference dividends, adding 100*l.* to the reserve fund, and 200*l.* to a fund for further development, there remains 2034*l.* to be carried forward. The cost of production of lead was reduced last year, but the fall in prices was against them. The principal movements during the week were advances of 2*s.* on Rio Tinto 5*s.* per cent., 36*s.* 6*d.* on Tharsis, 25*s.* on Cape, 12*s.* 6*d.* on Rio Tinto, 7*s.* 6*d.* each on Panulicillo and Tharsis (new), 5*s.* on Rio Tinto 7 per cent., 2*s.* 6*d.* on York Peninsula (pref.), and 1*s.* on York Peninsula (ordinary). Canadian Copper shares are also 3*s.* 6*d.* higher. Alamillos are at 30*s.*; Fortuna, 90*s.*; Linares, 90*s.*; New Querubia, 50*s.*; Panulicillo, 55*s.* to 60*s.*; Rio Tinto 5 per cent., 79*s.*; Yorke Peninsula (ordinary), 3*s.* 9*d.* to 5*s.*; ditto (preference), 12*s.* 6*d.* to 15*s.*

In shares of home mines the principal excitement has been in tin shares, prices of which have risen fast. Tin is more likely to have a real rise than other metals, because the production is falling off, and the stocks decreasing. Cheap shares, such as Wheal Kitty, ought to have a good rise, as a few years ago they were as high as 12*s.* At the Killifreth meeting a call of 5*s.* per share was made. West Frances have had a good rise, owing to an important discovery. Shares of lead mines also have improved very decidedly, especially Van and Leadhills. It appears the lead market is looking very well, and the resumption of dividends by the Great Laxey, which has announced a quarterly one of 5*s.* per share, has created a favourable impression. At Van Consols and Glyn United they are driving north to what is believed to be a continuation of the Van lode, and it will not be long before they reach it. East Roman Gravels is said to be paying costs now, with prospects of improving. All the debenture capital of the Red Rock Company has been issued, and the manager's last monthly report refers to a considerable improvement in the 25*s.* The Mondy Gorddu Company is to be reconstructed, and a call of 1*s.* per share made. The agents' reports from East Craven Moor and West Craven Moor mines note favourable progress, and the latter mine is preparing a good parcel of ore for smelting. Glasgow Caradon Copper shares have sold from 25*s.* 6*d.* to 29*s.* 6*d.*, and are very firm; the new shares easier. Asheton, 10*s.*; Bedford United, 9*s.*; Botallack, 55*s.*; Carn Brea,

52*s.*; Cook's Kitchen, 65*s.*; Devon Consols, 5*s.*; Dolcoath, 49*s.*; Dubby Sykes, 7*s.* 6*d.* to 10*s.*; East Cardon, 20*s.*; East Lovell, 77*s.* 6*d.*; East Chiverton, 40*s.*; East Pool, 18*s.*; Gorsedd and Merllyn, 50*s.*; Gunnislake (Clitters), 25*s.* to 27*s.* 6*d.*; Huntington Down, 7*s.* 6*d.*; Killifreth (call paid), 10*s.* to 15*s.*; Leadhills, 75*s.* to 80*s.*; Marke Valley, 22*s.* 6*d.*; Mwyndy, 49*s.*; Mellanear, 70*s.*; New Cook's Kitchen, 32*s.* 6*d.*; Parys Mountain, 14*s.* to 15*s.*; Red Rock, 21*s.* 3*d.*; Roman Gravels, 11*s.*; South Cardon, 52*s.*; South Condurrow, 14*s.* to 15*s.*; South Crofty, 8*s.*; South Frances, 10*s.*; Tankerville, 5*s.*; Tincroft, 18*s.*; Van, 20*s.* to 22*s.*; West Mary Ann, 7*s.* 6*d.*; West Chiverton, 95*s.*; West Basset, 9*s.*; West Peevor, 95*s.*; West Seton, 47*s.*; West Tolquis, 27*s.*; Wheat Kitty, 45*s.*; Wheat Agar, 77*s.* 6*d.*; Wheat Creebor, 87*s.* 6*d.*; Wheat Uny, 30*s.*

In shares on Richmond, which have varied from 7*s.* 7*d.* to 8*s.*

which the English company is engaged; all these lodes pass more or less through the English company's ground. Besides these lodes running in a north-easterly direction there are several cross-veins, striking at an angle of about 45°, and running in a north-westerly and south-easterly direction, intersecting the main lodes at various points. The company have secured about 140 English acres, with about 11,600 ft. on the various lodes, in perpetuity from the Spanish Government at £1. per annum rental. The property is on both banks of the River Sorbe, its channel exposing the lodes, and facilitating driving on their course. There is plenty of water at all seasons available by damming and canalisation, and Mr. Fowler recommends the sinking of trial shafts at the intersections of the cross-veins (probably the richest portions of the property), and also to drive from the side of the mountain on the course of the veins. Should this prove satisfactory it will then be for consideration whether to use water or steam power, wood for fuel and mining purposes being procurable in the neighbourhood at moderate cost. He further recommends that if ore worth 3 ozs. or upwards of gold be struck it should be sent to England, as the ore would be worth 10z. per ton, and the cost of mining and freight 4d. only. Mr. Fowler has "formed a favourable opinion of the company's prospects if its operations are conducted with skill and economy. The mass of quartz in the various mines is enormous, and if proved rich in gold there is enough to make energetic working profitable for a century."

RIO TINTO.—The directors, in accordance with the shareholders' wish, have issued an interim report. During the nine months of the current year which have now been completed, the production of copper precipitate at the mines has continued on a scale which fully justifies the expectation held out in the annual report. The metallic copper produced in that period was 588 tons of 1000 kilos., as against 324 tons during the same period last year. The cost of production has been sensibly diminished. The large reservoir has made the company comparatively independent of dry seasons; they have now, before commencement of usual rains, 123,000,000 gallons in store, whilst at the corresponding period last year the reserves were exhausted. The deliveries of pyrites for the nine months have been on an improved scale—say, an increase of 1000 tons per month, compared with those of the same period last year; and as the company benefits not only by the increased price of sulphur upon a portion of its sales, but also by a reduction in freights, and some diminution in the cost of output and of transport from the mines, as well as more favourable conditions of sale, the result for the year on this item will be a decidedly improved one. After the long period of depression in the metal trade, with constantly declining prices, it is highly satisfactory to your directors to report a marked advance within the last few weeks in the price of copper, the rise from the lowest point having been 10z. per ton. Should this advance be maintained a corresponding profit will accrue upon all the copper products of the company during the remainder of the year. The work at the mines progresses satisfactorily, and labour is abundant. The opening of the north lode is proceeding steadily. The closer inspection and the surveys which have been made of all the lodes have confirmed the directors in the estimate hitherto formed of the ample mineral resources of the company's property. The directors consider that from what they are able to put forward in this intermediate statement they are warranted in their belief that the report of the current year, to be presented in the spring, cannot but be satisfactory to the shareholders.

Meetings of Public Companies.

LINARES LEAD MINING COMPANY.

The half-yearly general meeting of shareholders was held at the offices of the company, Queen-street Place, on Thursday, Mr. WILLIAM COX in the chair.

Mr. HENRY SWAFFIELD (the secretary) read the notice calling the meeting. The report of the directors was taken as read, which appeared in last week's Journal.

The CHAIRMAN said that the first and only resolution which he had to propose to the shareholders was that the report, accounts, and balance-sheet, be received and adopted. He said that in submitting that proposal he had a few observations to make. During the whole time that he had been connected with the company he did not remember any period when the directors had had such an active time as in the past few months. When they saw lead down to 13z. and 12z. 15s. per ton it became a matter of serious consideration whether they should at once stop the mine (as many owners in the neighbourhood of Linares had done with their mines), or whether they should diminish the raisings and endeavour to make such a reduction in the rate of wages as would enable the company to pay the costs and keep the concern going. Of course there was a strong objection to shutting up the mine; all the establishment charges would have been going on, and when the price of lead increased, and there was a chance of making a profit, there would have been immense difficulty, if they had discharged their old hands, in regaining that labour. At one time the directors wavered as to which was the best course for them to pursue, but in the end they came to the determination that it was undoubtedly, in their opinion, far better to keep the mine going if it could be done without incurring loss, in the hope that a day would arrive when the company would be in a position to make good and ample profits. Happily in Spain they had to deal with working men who were very different from English artisans and working men, because when the question was put to them as to whether they would submit to such a reduction of wages as would enable the works to be kept on the men readily submitted, and it was owing to this that the works had been kept on, and a small dividend paid to the shareholders. In England under similar circumstances there would probably have been a strike by the men employed, and the water would have got into the mine, and there would have been a great deal of wretchedness and misery, and he would not be able to present to-day to congratulate the shareholders upon being able to declare a small dividend, and tell them that they hoped to be able to make four or five times as much by the next time they met. When reports were *courteuse de rose* it was a pleasant thing for directors to meet the shareholders, but when dividends had declined, as in this company, from 19s. to 4s. 6d. it was not so agreeable, and it was due to the shareholders, both present and absent, to give some information as to how such a state of things arose. In that room when the dividends were reduced from 11s. per annum to 19s. and then 13s. 4d., they used to complain of the price of lead falling from 22z. 10s. down to 19z. 10s., but he might tell them that during the past six months working, from January 1 to June 30, the sales of the company's lead averaged only 13z. 12s. 6d. per ton, but notwithstanding that, by the economies which had been introduced by the forbearance of the workmen, the company had been enabled to carry on the mine vigorously, and also to pay a dividend of 2s. per share. When the reduction was made in the wages the directors thought that it would be a pity to endeavour to get all the profit they could out of the property, and they decided to diminish the raisings as much as possible, so as to leave, as nearly as they could calculate, just enough profit to pay their way, and a surplus to pay a small dividend. This had been done, and the result had been that the reserves of the mine had been increased to the extent of 950 tons, which meant a good dividend; and now that the price of lead was getting higher, and he hoped it would continue to rise, he looked to the time when he would put a good round sum in his pocket as a large shareholder for many years, and he hoped the other shareholders would do the same, and that they would be able to resume what he called a respectable dividend of 12s. or 12s. 6d. per share per annum. He was happy to say that the price of lead had risen considerably since June last. The company was bound to sell their produce, because they were not lead speculators but lead producers, and must sell their produce to enable them to meet their engagements. Since June they had sold lead from 13z. 12s. 6d. up to 15z. per ton. That was up to the last board meeting, and at that meeting they sold at 15z. 7s. 6d. and 15z. 10s., so evidently if they could make a small dividend upon an average price of only 13z. 12s. 6d., he thought with the improved price of lead he was not wrong in predicting a better dividend for the current six months. (Hear.)

Mr. DONAGAN said he had much pleasure in seconding the resolution for the adoption of the report and accounts. He conceived that any shareholder who had paid any attention to the matter must have realised the very great difficulty which the directors had had to contend with, and must be pleased with the manner in which those difficulties had been surmounted. He also pointed out that there was another difficulty which the directors had had to contend with, and that was the constantly diminishing value of the stock, but whilst this had increased the difficulties in the past, it also increased the cheering prospects for the future.

Mr. COPLAND referred to the London expenses, and expressed an opinion that it would be well if a little economy could be introduced into those expense.

Mr. TENDRON said that the business of the company had been carried on for some years successfully, and it was rather ungracious to make these remarks about the London expenses because they happened to have been a time of temporary depression. The mine was so well managed by the Messrs. Taylor, and by the directors generally, that he was sure the remarks of the shareholder would not be endorsed by the meeting at large.

The CHAIRMAN pointed out that many years ago the directors voluntarily gave up 4000, out of the 8000, a year which the shareholders voted them; when good times afterwards came they took 2000. more, making it 6000., and that was at present what they were receiving, and not 8000. to which they were entitled.

In reply to a further question by Mr. COPLAND, the CHAIRMAN said the income tax was paid upon an average of three years.

Mr. JOHN TAYLOR said he might make one remark in confirmation of what Mr. Tendron had said. His brother (Mr. Richard Taylor) and himself prided themselves upon managing the affairs placed in this office in the most economical manner of any office in London. The staff was selected with great care, and was composed of men of considerable ability, and had impressed those who had come in communication with them. He considered the payment to himself and to his firm to be extremely moderate. This had been a large and valuable concern to the shareholders, involving great care and consideration, and the whole thing was managed for an amount which compared favourably with other concerns of similar character in the City of London. He knew the bulk of the shareholders were thankful to the directors for the services rendered, and not less so for the services rendered by his brother and himself. (Hear, hear.) He and his brother had had great experience in the management and selection of men, and had brought around them a principal manager, a staff of agents, and also clerks and cashier who, he was proud to say, were generally respected in that country, and were well fitted to occupy the position they did. He would not say more, as he believed the shareholders generally would consider the expenses were not excessive, and that directors in these anxious times should be paid a liberal compensation. (Hear, hear.) As regarded the mine, it would be seen that the quantity of ore available was larger than it had been—950 tons; and the mine, taken as a whole, was looking remarkably well. He had looked into the accounts, and found the raisings at Linares Mine were 275 tons per month, which was valued on the mine at 17. per ton, which were equal to 1925. per month, and there was also a profit on the smelting. They had paid in tutwork cost and for exploratory work to keep the mine open 27 per cent. of that value; he had always held as a rule that if a man had a good mine, and was to expand 20 per cent. of the gross value of his property, he would keep his mine generally in an improved position. That had been done at Linares. At present

there were three mines at Linares—there was what was called the San Francisco lode, there was the Warne's Mine, and there was the Peill's engine-shaft, all of which were looking well, and would be able to return easily 25 tons per month more than last half-year, and so the shareholders might look forward to an increased dividend. Orders had been given to Capt. Tonkin to give more ore from the Linares Mine, so he hoped there would be increased profit upon all three of those mines, seeing there had been increased price of about 3z. per ton for lead. There was another comfortable feature, and that was that the price of silver was tending in favour of the company. The directors had no opportunity at the end of last year in purchasing ore for the smelting works as they were outbid, and it was not wise to compete, and they let others buy it. The directors had had one or two contracts which were disagreeable to them, but they had now been fulfilled, and the company was now hoping again to buy one in the general market at a price which he thought it would make it desirable to keep the men fully employed. There was a great demand for one particular kind of lead which the company produced, and which he hoped would yield a much larger profit than formerly. He went on to refer to the encouraging fact that the exports of lead from this country were increasing, and that the imports were somewhat decreasing. He hoped at the next meeting the directors would be able to render a still more cheerful report. He had received news that morning from the broker of his firm in Paris which led him to believe there would be better prices, one passage of the letter being—"I believe we may expect to see very soon 20z. per ton; the demand is large, and very few sellers."

Mr. TAYLOR, in answer to Mr. TENDRON, said the production of lead in America had recently somewhat decreased, and he did not expect they would send any American lead here.

The resolution was then put and carried.

On the motion of Mr. TENDRON a vote of thanks was passed to the Chairman and directors; and the meeting broke up.

FORTUNA COMPANY.

The half-yearly general meeting of shareholders was held at the offices of the company, Queen-street-place, on Thursday,

Mr. ROBERT HENTY in the chair.

The notice calling the meeting was read by Mr. HENRY SWAFFIELD, the secretary. The report of the directors, which has already been published, was taken as read.

The CHAIRMAN said he had not much to say upon the position and prospects of the mine, but what he had to say was satisfactory. It was true that the dividend was small, but that was unfortunately the fault of circumstances and not the fault of the directors. When they saw lead at the low price of 13z. and 12z. 10s. per ton the only wonder was that the directors had been able to scrape together enough money to enable them to declare a small dividend. It had only been by great exertions on their part, and the excellent management of their property in Spain, that it had been accomplished. The miners had submitted to a reduction in wages, and the greatest economy had also been exercised in every other respect. That had enabled the superintendent to continue the works, whereas many of the neighbouring mines had been closed. The directors considered that the work out there had been done most judiciously, and the mine was now in a most efficient condition, and the reserves, which had not been diminished, provided against the future, whereas other mines in the district had deteriorated considerably both in the quantity and the quality of the yield. He believed it was the opinion of the superintendent that when he got to work on a larger scale it would be found that a better class of men would naturally come to a mine which had not discharged its hands, and that the pick of the miners would be attracted to this company's works. At the last meeting it was voted by the shareholders that the sum of 5000. should be withdrawn from the reserve fund to be invested in mines close to the Fortuna. Since then two mines had been entirely purchased, and negotiations were going on for the purchase of two more. The amount expended had been about 28000.; but at present no specified amount appeared in the accounts, which were made up to June 30, and he was speaking of the state of affairs at the present time. The increase in the price of lead was a matter of great congratulation. He pointed out that commerce generally, but the mining interests particularly, had greatly suffered from the depression which had prevailed, a great many mines having paid no dividend at all; therefore, the directors came before the shareholders to-day with feelings of pleasure, for although the dividend was small, and somewhat disappointing, the directors were able to come before the shareholders and say there was a better price for lead, the rise since the accounts were made up having been from 2z. to 3z. per ton, which would make a difference in the aggregate receipts of some thousands a year. But they must not expect that the full benefit of the rise in price would appear in the current half-year; but it would tend to improve the dividend when the proper time came. There had been one important matter which had occurred at the mine, which would have an important beneficial effect in connection with the transport of ore and carriage of coals. The railway which had been in progress for two or three years past had now been in operation for some little time, and when he was at the mine last spring he saw carriages and engines running on the line. Through some red-tapeism the railway company would only allow their own trucks to run; the authorities were anxious to find employment for people in the neighbourhood during the great depression in trade, and the provinces were carrying forward large quantities of material to mend the roads, in order to keep the general population employed; but he believed that the railway was now being opened not only for the carriage of those materials, but also for the transport of ores and coal to and from the mine. This would effect a saving; but at present the railway had not settled the actual charge, but it was well known that it would be such that it would be advantageous to this company. The superintendent had been instructed to economise as much as possible, and if possible to make a small profit, but not to reduce the reserves, the directors considering it would be suicidal to take away ore, and sell it at a price which yielded little or no profit. Therefore, the reserves had been maintained, and so far the mine was more valuable than it was twelve months ago. He moved the adoption of the report and accounts.

Mr. S. J. WILDE seconded the resolution, and asked what engines were on the new mines?—The SECRETARY said there was an engine purchased for one of the mines, and an engine would be transferred to the other new mine from the Salidors Mine. Mr. W. COX, in answer to a question, said the 5000. would not only buy and equip the mines to which allusion had been made, but he believed there would be 1000. left in hand to go on with.

Mr. HIRST said the directors seemed to have made an excellent purchase. He asked whether the two mines were in actual work when the company bought them, or whether they had been closed in consequence of depression?—Mr. TENDRON said he hoped nothing would discourage the directors from spending money to secure advantageous property during the present depressed state of things. Such a state of things was not likely to occur again for a long time, and he hoped the directors would take advantage of it, if they thought that it was desirable, and purchase advantageous properties. It was very satisfactory to know that Mr. Henty had visited the mine, as an occasional visit from a member of the board had a beneficial effect upon all employed.

Mr. DONEGAN said he did not see that any charge had been made in the accounts in connection with Mr. Henty's visit.

Mr. W. COX said no charge had been made. Mr. Henty was in the South of France, and had taken that opportunity of going on to visit the mine. Certain questions had arisen as to whether the directors could vote any payment whatever to one of their own body, and, therefore, the directors had not voted anything for the payment of Mr. Henty's expenses, but the shareholders had full power to vote a sum of money for that purpose, and he was sure there was not a member of the board who would dissent from it.

Mr. S. J. WILDE thought the directors had the power to vote the money; at any rate he fully approved of Mr. Henty's expenses being paid.

Mr. TENDRON, Mr. DONEGAN, and one or two other shareholders coincided, and expressed an opinion that it was a great advantage to have a director occasionally visit the mine.

The CHAIRMAN, in reply to Mr. HIRST, said the new mines had been worked, but had been suspended in consequence of the great depression of the times, and Mr. Tonkin purchased them thinking they were worth the money.

The resolution for the adoption of the report and accounts was then put and carried.

Mr. JOHN TAYLOR said he was at the mines in the summer of last year, a few months before Mr. Henty was there, and he fully approved of Mr. Tonkin making additions to the mineral proper-

ties when he had the opportunity of doing so with advantage. They must remember that the quantity and quality of the ore at Fortuna had been marvellously good, but the mine was now getting deeper and somewhat more expensive to work, and it was desirable, when the company had the means, that additions should be made to the property they already possessed. The district in which the new mines were situated had been peculiarly good and productive during the past few years. Within the last two years the company had acquired the mine of Buena Ventura, and when he was there he formed a high opinion of it. The two mines which had recently been taken were near the Fortuna, and somewhat to the north. The veins were not very large, but the ground was easy, and had been worked profitably, and he believed would be worked profitably again. The construction of the terminus of the railway at the mine would be an advantage. The ore were smelted on the spot very carefully, and he believed advantageously, and if they could buy ore they could do better still. He believed the new mines would turn out an advantageous investment of the company's money.

On the motion of Mr. DONEGAN, seconded by Mr. HIRST, a resolution was passed requesting the directors to pay Mr. Henty his expenses in connection with his visit to the mine.—Mr. HENTY acknowledged the vote.

On the motion of Mr. TENDRON, seconded by Mr. S. J. WILDE, a vote of thanks was passed to the Chairman and directors, and the meeting broke up.

ALAMILLOS MINING COMPANY

The half-yearly meeting of shareholders was held at the offices of the company, Queen-street-place, on Thursday,

Mr. J. P. JUDD in the chair.

The notice calling the meeting was read by Mr. H. SWAFFIELD, the secretary. The report of the directors was taken as read. It has already been published in our columns.

The CHAIRMAN, in moving the adoption of the report and accounts, said he would detain the shareholders only a very short time. It was always more agreeable to directors to meet the shareholders when they were able to declare a dividend, but he was sorry, as they would see by the report, that on the present occasion they could not recommend a dividend. But at the same time there was an agreeable feature in the accounts compared with those rendered on the previous occasion. At the last meeting there was a loss, but it was sorry to say, of 5000., whereas on the present occasion there was a profit of 276z. This small profit had been made at a time when lead was ruling at 13z. 12s. 6d. He was happy to say that within the last few days the price of lead had risen, and to-day was selling at 16z. 15s. per ton.

Mr. JOHN TAYLOR: It is selling at 17z.

The CHAIRMAN said it was so much the better. The rise in price would make a difference to the company of about 3z. per ton, which, in the aggregate, would give about 4000. per annum; therefore, it was reasonable to hope that by the time of the next meeting they would have the pleasure of deriving, not the full benefit from this increase of price (for the full benefit could not be derived in the current year), but at any rate a considerable benefit, and he hoped they would be able to declare a small dividend. The mine was in a very satisfactory position. The lode at the 115, which was the deepest point, had been turning out 2 tons and 3 tons per fathom, which was satisfactory, and there were many other points of the mine which the directors hoped to work if the price of lead went up to about 19z., for they could then be worked at a profit. The directors had studied economy to the greatest possible extent, and he thought the shareholders would agree in thinking the future of the mine encouraging. (Cheers.) He moved the adoption of the report and accounts.

Mr. SHELDON seconded the resolution.

Mr. COPLAND, as in the case of the Linares Company, then drew attention to the London expenses, which he considered too high, and which, according to his reading of the accounts, were in excess of some previous years.

Mr. J. TAYLOR said the real point was not the amount but the percentage of expenses, and said that last year the percentage was less than in any similar company.

Mr. S. J. WILDE said that he was connected with other companies having offices at the Messrs. Taylors, and he had always found strict economy observed, and it was within his own knowledge that in some the directors had voluntarily reduced their remuneration.

Mr. WILKINSON asked for an explanation of the item of legal expenses?

The SECRETARY explained that it was in connection with certain forms which had to be sent out to Spain for securing the property in the name of the company and for its proper registration.

A SHAREHOLDER asked whether the reserves of ore were of the extent stated in the report?—Mr. JOHN TAYLOR: Mr. Tonkin states that they are to that extent, and in the report?—Mr. WILDE: I do not know Mr. Tonkin will doubt his word.

The resolution was then put and carried.

Mr. JOHN TAYLOR said he had little or nothing to add to the information which had already been laid before the shareholders. The bottom part of the mine was looking well, and there were points in advance to the westward

TWO GOLD MEDALS.



SOLE MAKERS—

The LEEDS FORGE CO., Ltd.,
Leeds, Yorkshire.

FOX'S PATENT

CORRUGATED FURNACE FLUES,

NOW APPLIED TO OVER,

5



IND.



H.P.

PARIS, 1878.

PRICE LISTS AND
PARTICULARS
ON APPLICATION.

Awarded Gold Medal, Paris Exhibition, 1878.

HADFIELD'S STEEL FOUNDRY COMPANY.

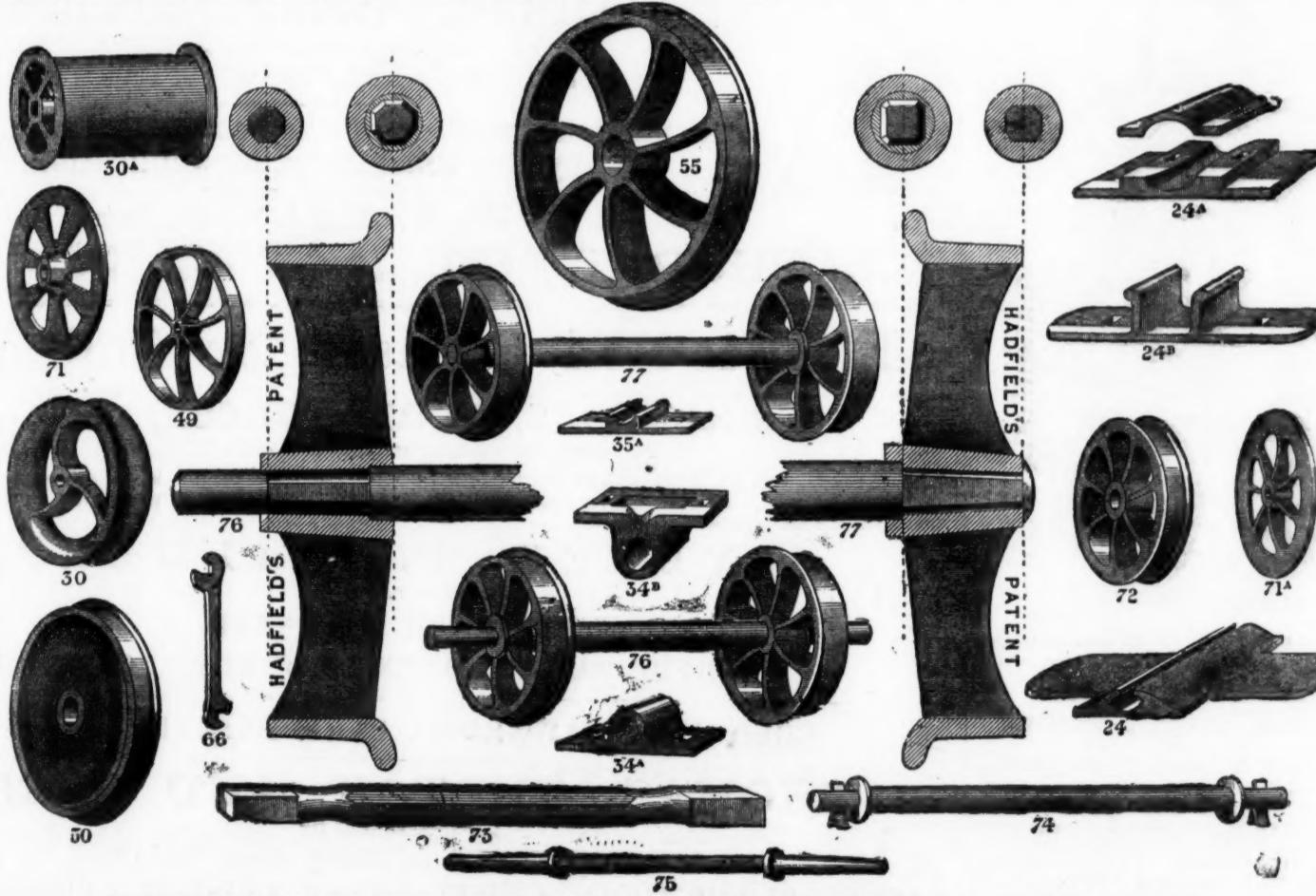
FIRST PRIZE MEDALS AT LEEDS, MANCHESTER, AND
WREXHAM EXHIBITIONS, 1875 AND 1878.ATTERCLIFFE, SHEFFIELD,
DEVOE THEIR EXCLUSIVE ATTENTION TO THE MANUFACTURE OF
CRUCIBLE STEEL CASTINGS,
FOR
Engineering & Mining Purposes,

AND ARE THE SOLE MAKERS OF

HADFIELD'S CRUCIBLE STEEL WHEELS.

One of our departments is specially adapted for the manufacture of these Wheels (as shown below), for Collieries, Ironstone Mines, Slate Quarries, Ironworks, Lead Mines, &c., &c. We have made, and are now making, many HUNDRED THOUSANDS; and having Patented a New Method of Fitting Wheels upon axles, being cheap, effective, and expeditious, we can execute orders entrusted to us with promptitude, our capacity in this department alone being equal to about 2000 wheels per week.

N.B.—Prices per Set of Wheels and Axles, fitted complete, forwarded on receipt of diameter of wheel on tread, depth of tread, real gauge, and thickness of axles and rolling load.



HADFIELD'S PATENT METHOD OF FITTING WHEELS UPON AXLES.

The advantages of the above system are that the Wheels being forced upon a Taper Square-ended Axle, by Machinery, and then riveted (the machine securing truth), it is impossible that they can come loose or get within gauge. They are very cheaply fitted on, and run exceedingly true.

We construct the Arms of wheels upon the curved principle (as shown in the drawings above), consequently the shrinkage or cooling of the Castings is not interfered with, thus securing the greatest advantage of our very strong material.

CRUCIBLE CAST-STEEL WHEELS, when cast by us, are made from one-third to one-half lighter than Cast-Iron. They cannot be broken while working, even with rough usage, and will wear at least twelve times as long as Cast-Iron, thus saving animal and steam power, and reducing wear and tear immensely.

We would also draw special attention to our INCLINE PULLEYS and CAGE GUIDES, the adoption of which will prove highly advantageous.

MACHINE MOULDED STEEL GEAR WHEELS OF EVERY DESCRIPTION.

JOHN WILLIAMS AND CO.,
WISHLAW, SCOTLAND,
MANUFACTURERS OF ALL KINDS OF

Cut and Lath Nails; Joiners', Moulders', and Flooring Brads; Copper and Zinc Cut Nails; Colliery Plate Nails; Washers, Boiler Plates, Tube Strips, Sheet Iron for Galvanising and other purposes.

PRICE LIST ON APPLICATION.

PIERCE S. HAMILTON, PRACTICAL GEOLOGIST, SURVEYOR, AND MINING ENGINEER AND AGENT, OFFERS HIS SERVICES in either of these capacities to those interested or desirous of investing in MINING PROPERTY in the PROVINCE OF NOVA SCOTIA or elsewhere in the DOMINION OF CANADA.

Having for years filled the administrative position of Chief Commissioner of Mines for Nova Scotia, and having both before and afterwards been himself largely engaged in Mining operations, Mr. HAMILTON has had exceptionally good opportunities of informing himself as to the variety, extent, and character of the mineral deposits of that Province, and as to the most economical and effective methods of working them.

ADDRESS—PIERCE S. HAMILTON, HALIFAX, NOVA SCOTIA, DOMINION OF CANADA.

MONEY LENT, at EIGHT, NINE, and TEN PER CENT., on FIRST MORTGAGE of FREEHOLDS for IMPROVEMENTS and STOCKING, said freeholds in the Province of MANITOBA.
Address, HERBERT C. JONES, SOLICITOR, 20, Masonic Hall, TORONTO.

At the PARIS EXHIBITION the Jurors have Awarded

**THE GOLD MEDAL, THE SILVER MEDAL, AND HONOURABLE MENTION
FOR MY LATEST PATENTED STONE BREAKERS AND ORE CRUSHERS.**

Stones broken equal, and Ores better, than by hand, at one-tenth the cost.

H. R. MARSDEN,

ORIGINAL PATENTEE AND SOLE MAKER OF BLAKE'S

Improved Patent Stone Breakers & Ore Crushers.

New Patent Reversible Jaws,
in Sections, with Patent
Faced Backs.

NEW PATENT ADJUSTABLE
TOGGLES.

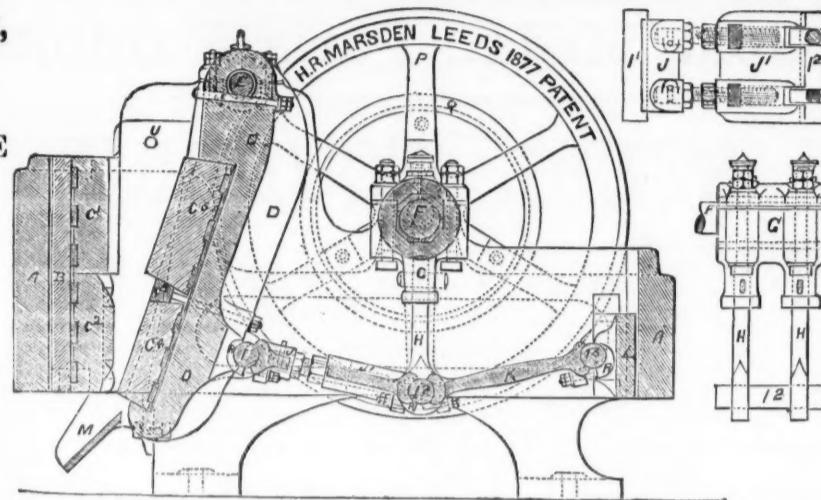
OVER 2500 IN USE.

New Patent Draw-back
Motion.

NEW PATENT STEEL TOGGLE BEARINGS.

70

PRIZE MEDALS.

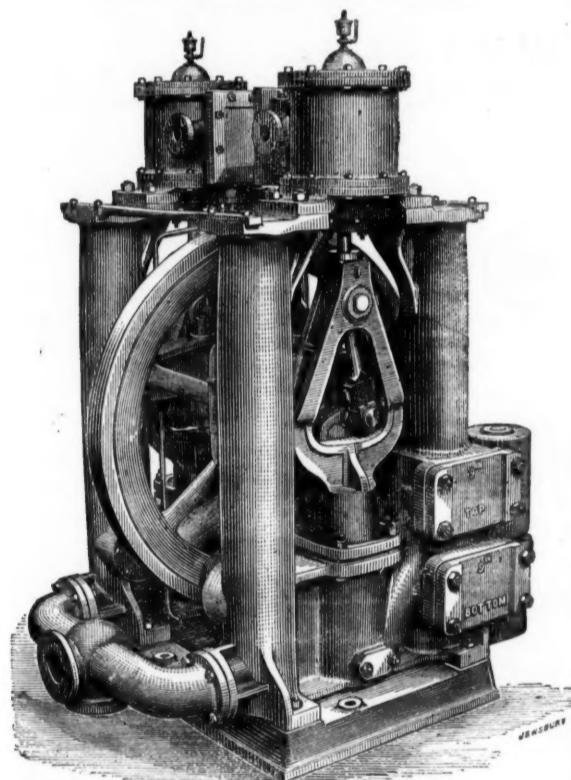


GREATLY REDUCED PRICES ON APPLICATION.

ALL BEARINGS are renewable, and made of H.R.M.'s Patent Compound ANTIFRICTION METAL.

CATALOGUES, TESTIMONIALS, &c.

H. R. MARSDEN, SOHO FOUNDRY, LEEDS, ENGLAND.



STEAM PUMPS for COLLIERY PURPOSES, specially adapted for Forcing Water any height; also for Sinking; and for Feeding Boilers.

JOHN CAMERON has made over SIX THOUSAND.

WORKS: OLDFIELD ROAD, SALFORD, MANCHESTER.

SILVER MEDALS AWARDED AT CORNWALL POLYTECHNIC
1872 AND 1876.

THE WELL-KNOWN PATENT SELF-ACTING ORE DRESSING MACHINERY, as in operation at most of the large Mines in the Kingdom and Abroad, is now supplied solely by THE PATENTEE AND MANUFACTURER, Mr. GEORGE GREEN, Mining Engineer, AT GREATLY REDUCED PRICES; also all descriptions of Mining Machinery, including

GOLD AND SILVER AMALGAMATING MACHINERY, complete.

Stamp Mills, Water Wheels, Steam Engines, &c.

ROLLER SHELLS FOR CRUSHING MILLS—a speciality.

SPECIAL DESIGNS FOR EXPORT AND DIFFICULT TRANSIT.

Prices and particulars on application to the Manufactory,
ABERYSTWITH, SOUTH WALES.

THE GREAT ADVERTISING MEDIUM FOR WALES.

THE SOUTH WALES EVENING TELEGRAM
(DAILY), and
SOUTH WALES GAZETTE
(WEEKLY), established 1857.

The largest and most widely circulated paper in Monmouthshire and South Wales. Chief Offices, NEWPORT, Mon.; and at CARDIFF.

The "Evening Telegram" is published Daily, the First Edition at 3 P.M.; the Second Edition at 5 P.M. On Friday, the "Telegram" is combined with the "South Wales Weekly Gazette," and Advertisements ordered for not less than Six Consecutive Insertions will be inserted at an Uniform Charge in both papers. P.O.O. and Cheques payable to HENRY RUSSELL EVANS, 14, Commercial-street, Newport, Monmouthshire.

THE NEWCASTLE DAILY CHRONICLE
(ESTABLISHED 1764).
THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER,
Office, Westgate-road, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

READ THIS—

Wharhole Lime Works, Maryport, Whitehaven,
November 7, 1873.

H. E. MARSDEN, Esq., Soho Foundry, Meadow-lane, Leeds.
DEAR SIR.—The machine I have in use is one of the large size, 24 in. by 12 in. The quantity we are breaking daily with this one machine in 250 tons, the jaw being set to break to a size of 2½ in. We have, however, frequently broken over 300 tons per day of ten hours, and on several occasions over 360 tons during the same period. The stone we break is the blue mountain limestone, and is used as a flux in the various ironworks in this district. We have now had this machine in daily use for over two years without repairs of any kind, and have never had occasion to complain of any inconvenience in using the machine. I hope the one you are now making for me may do its work equally well. The cost—INCLUDING ENGINE-POWER, COALS, ENGINE-MAN, FEEDING, and all EXPENSES OF EVERY KIND—is just 3d. per ton. Should any of your friends feel desirous of seeing one of your machines at work, I shall have much pleasure in showing the one alluded to.

I am, dear Sir, yours very truly,

WILLIAM MILLER.

AND THIS—

Wharhole Lime Works, Aspatria, Cumberland,
July 11th, 1878.

H. R. MARSDEN, Esq., Soho Foundry, Leeds.
DEAR SIR.—We are in receipt of your letter of 4th inst. I may just state that the stone breaker above named has been under my personal superintendence since its erection, and I have no hesitation in saying that it is as good now as it was five years ago.

I am, dear Sir, yours faithfully,

FRANCIS GOULD.

THE "CHAMPION" ROCK BORER

MINE AND QUARRY STANDS, STEEL DRILLS, SPECIALLY PREPARED INDIARUBBER HOSE, TRUSTED IRON PIPES, &c.

Air-Compressing Machinery,

Simple, strong, and giving most excellent results, and
ELECTRIC BLASTING APPARATUS.



Full particulars of rapid and economical work effected by this machinery, on application.

R. H. HARRIS, late

ULLATHORNE & CO., Mechanical and Consulting Engineers,
63, QUEEN VICTORIA STREET, LONDON, E.C.

**Electric-Bell Signals for Collieries,
Factories, Warehouses, &c.,**

WITH OR WITHOUT GALVANIC BATTERIES.

NEW SYSTEM—CAN BE RUNG AT ANY PART OF THE ROAD. Cheap, safe, and reliable. Efficiency guaranteed. LINES OF TELEGRAPH erected and maintained. LIGHTNING CONDUCTORS, &c.

For estimates and particulars apply to—

SYDNEY F. WALKER,

LATE G. E. SMITH,

TELEGRAPH ENGINEER

COMMERCIAL BUILDINGS LONG ROW NOTTINGHAM.

GOLD MEDAL AWARDED, PARIS EXHIBITION 1878.

THOMAS TURTON AND SONS,

MANUFACTURERS OF

MINING STEEL of every description.

CAST STEEL FOR TOOLS. CHISEL, SHEAR, BLISTER, & SPRING STEEL

MINING TOOLS & FILES of superior quality.

EDGE TOOLS, HAMMERS, PICKS, and all kinds of TOOLS for RAILWAYS, ENGINEERS, CONTRACTORS, and PLATELAYERS.

LOCOMOTIVE ENGINE, RAILWAY CARRIAGE and WAGON SPRINGS and BUFFERS.

SHEAF WORKS & SPRING WORKS, SHEFFIELD.

LONDON OFFICES.—90 CANNON STREET, E.C. PARIS DEPOT—12, RUE DES ARCHIVES.

J. WOOD ASTON AND CO., STOURBRIDGE

(WORKS AND OFFICES ADJOINING CRADLEY STATION).

Manufacturers of

CRANE, INCLINE, AND PIT CHAINS,

Also CHAIN CABLES, ANCHORS, and RIGGING CHAINS, IRON and STEEL SHOVELS, SPADES, FORKS, ANVILS, VICES, SCYTHES, HAY and CHAFF KNIVES, PICKS, HAMMERS, NAILS,

RAILWAY and MINING TOOLS, FRYING PANS, BOWLS, LADLES, &c., &c.

Crab Winches, Pulley and Snatch Blocks, Screw and Lifting Jacks, Ship Knees, Forgings, and Use Iron of all descriptions.

STOURBRIDGE FIRE BRICKS AND CLAY.